Town of Nantucket

TOWN OF NANTUCKET
INVITATION FOR BIDS
RECONSTRUCTION OF CHILDREN'S BEACH BOAT RAMP

The Town of Nantucket, through its Board of Selectmen, invites qualified bidders to submit bids for the demolition of an existing boat ramp and the construction of a new boat ramp at Children's Beach, Nantucket, MA.

I. GENERAL INFORMATION.

1) Bids will be accepted at the Town of Nantucket, Selectmen's Office, 16 Broad Street, Nantucket, MA 02554, until 2:00 PM, Wednesday, October 18, 2006, and publicly opened forthwith. Two copies of the bid are required.

2) The bid envelope must be sealed and clearly marked:
Bid for Reconstruction of Children's Beach Boat Ramp

3) Bids are subject to MGL c. 30 §39M and to prevailing wage rates.

4) Award date. Award will be made within forty-five (45) days after bid opening unless otherwise stated in the specifications or the time for award is extended by mutual consent of all parties. All bids submitted shall be valid for a minimum period of forty-five (45) calendar days following the date established for acceptance.

5) If any changes are made to this IFB, an addendum will be issued. Addenda will be mailed or faxed to all bidders on record as having requested the IFB.

6) Questions concerning this IFB must be submitted in writing to: Diane O'Neil, Board of Selectmen, 16 Broad Street, Nantucket, MA 02554, email: doneil@nantucket-ma.gov before 2 PM, Wednesday, October 11, 2006. Questions may be delivered, mailed, emailed, or faxed. Written responses will be mailed, emailed, or faxed to all bidders on record as having requested the IFB.

7) Bids may be modified, corrected or withdrawn only by written correspondence received by the Town of Nantucket prior to the time and date set for the bid opening. Bid modifications must be submitted in a sealed envelope clearly labeled "Modification No. ___" and must reference the original IFB.

8) After the bid opening, a bidder may not change any provision of the bid in a manner prejudicial to the interests of the Town of Nantucket or fair competition. Minor informalities will be waived or the bidder will be allowed to correct them. If a mistake and the intended bid are clearly evident on the face of the bid document, the mistake will be corrected to reflect the intended bid, and the bidder will be notified in writing; the bidder may not withdraw the bid. A bidder may withdraw a bid if a mistake is clearly evident on the face of the bid, but the intended correct bid is not similarly evident.

9) The Town of Nantucket reserves the right to reject any and all bids and to waive any informality in bids received whenever such rejection or waiver is in its best interest.

10) The Town of Nantucket will not be responsible for any expenses incurred in preparing and submitting bids. All bids shall become the property of the Town of Nantucket.

11) Responders must be willing to enter into the Town of Nantucket's standard form of contract that will include the scope of services description of this IFB.

12) The bid, and any subsequent contract for the services, is hereby issued in accordance with applicable Massachusetts General Laws. The selected bidder shall be expected to comply with all applicable state and federal laws in performance of service.

13) Bids received prior to the date of opening will be securely kept, unopened. No responsibility will attach to an officer or person for the premature opening of a bid not properly addressed and identified.

14) Any bids received after the advertised date and time for opening will be returned to the responder unopened.

15) Purchases by the Town of Nantucket are exempt from federal, state and municipal sales and/or excise taxes.

16) The Tax Compliance Certification and the Certificate of Non-Collusion must be included with the bid response. The bid must be signed by the authorized individual(s).

17) Unexpected closures. If, at the time of the scheduled bid opening, Town Hall is closed due to uncontrolled events such as fire, snow, ice, wind or building evacuation, the bid opening will be postponed until 3:00 PM on the next normal business day. Bids will be accepted until that date and time.

18) The Town of Nantucket is an Affirmative Action/Equal Opportunity Employer. The Town encourages bids from qualified MBE/DBE/WBE firms.

19) Bidders should be aware that many overnight mailing services do not guarantee service to Nantucket.

20) Bidders must submit a five percent (5%) bid deposit with their bids. The bid deposit may be in the form of a certified, treasurer's or cashier's check from a responsible bank or trust company payable to the Town of Nantucket, cash, or a bid bond from a surety company.

21) The winning bidder or Contractor must furnish a payment bond from a surety company in the amount of at least 50% of the contract price to guarantee payment to materials suppliers and/or subcontractors in the event the general contractor fails to pay the material suppliers and/or subcontractors.

22) PREVAILING WAGE Pursuant to Massachusetts General Laws, chapter 149, sections 26 and 27, the Division of Occupational Safety (formerly the Department of Labor and Industries) has determined the Prevailing Wage Rates for this work. The enclosed rates apply only to this work. The Prevailing Wage shall become part of the contract signed between the successful bidder and the awarding authority or the contract is invalid. Prevailing Wages must be paid to all persons employed on the public works project, regardless of whether they are employed by the successful bidder or a subcontractor. The wage rates issued for each project shall be paid for the entire project. Payroll records must be kept by the successful bidder for all persons employed on the project. A separate Statement of Compliance must be submitted to the Division of Occupational Safety by every employer, including all prime contractors and

subcontractors, when its portion of the work is completed. The enclosed form entitled "Weekly Payroll Records Report and Statement of Compliance" clearly details these requirements. A certified payroll must be submitted to the Board of Selectmen office for each week work is performed for the Town under this contract.

23) Contractor must comply with: Chapter 306 of the Acts of 2004 § 1. (3) who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and SECTION 2 (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration. (b) Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal. SECTION 5 This act shall take effect on July 1, 2006.

24) Commencement of Work After the contract is awarded and executed, the successful bidder shall be expected to commence work on the base bid immediately and proceed in a timely and efficient manner until project completion and acceptance.

II BID SUBMISSION REQUIREMENTS.

1. The Tax Compliance Certification must be included with the bid response. The bid must be signed by the authorized individual(s).

2. A Certificate of Good Faith must be submitted with the bid response.

3. Bidders must submit a bid deposit of five percent (5%) of the amount of the bid, with the bid. Bid deposit may be in the form of a certified check; a bank, treasurers or cashier's check; cash; or a bond from a surety company.

4. Bid Price Form.

5. Reference list per Section V of this IFB.

III Service Description.

Supply labor, materials, and equipment for the demolition of existing boat ramp structure and construction of new timber pile supported, timber sheeting, and bituminous and concrete boat ramp at Children's Beach, Nantucket, MA in accordance with the plans prepared by Childs Engineering Inc. and the written specifications contained herein as Attachment A.

Inspections of work: Contractor shall contact Town to arrange for inspections at the following milestones of work:

- After the demolition is complete, and prior to beginning new construction
- Prior to concrete slabs being placed

Permits: All required permits for this project have been secured by the Town of Nantucket.

Completion of work: Contractor shall complete work by April 1, 2007.

Bonding Requirements: The successful bidder must provide a fifty percent (50%) payment bond from a surety company licensed in Massachusetts payable to the Town of Nantucket within ten (10) days of the notification of the contract award.

IV Quality Requirement.

1. Bidder must provide all of the items described in Section III and comply with all of the bid submission requirements listed in Section II.

2. Bidder must have been in business of marine construction for a minimum of ten years.

V. References.

1. Bidders must provide a complete list of all customers from whom it performed a similar service, costing over $100,000 in the past three years. Reference information must include Company/Government, Contact Person, Phone Number, Fax Number and date of purchases.

Poor references may be a basis for determining that a bidder is not responsible. Reference questions will include but may not be limited to vehicle quality and durability, timely delivery, customer service and general customer satisfaction.

VI. Rule for Award.

One contract will be awarded to the responsive and responsible bidder offering the lowest price for labor and materials combined.

VII. Basis of Compensation.

Fixed price contract there will be no reimbursable expenses.

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature of person signing bid or proposal

Please Print Name

Name of Business

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Federal Employer ID Number

Name of Corporation

President's Signature Date

Please Print Name

BID PRICE FORM
CHILDREN'S BEACH BOAT RAMP RECONSTRUCTION

To the Town of Nantucket:

A. The Undersigned proposes to furnish all labor, materials, and equipments required for the demolition of the existing Children's Beach Boat Ramp on Harbor View Way, Nantucket, Massachusetts, and the construction of a new boat ramp in accordance with the accompanying plans and specifications prepared by Child's Engineering Inc. for the contract price specified below, subject to additions and deductions according to the terms of the specifications.

Bid Price must include all labor costs, all material costs and all other expenses.
There will be no reimbursable expenses allowed in the contract.

No.	Brief Description of Work	Amount
1	Demolition of existing boat ramp structure	$
2	Construction of new boat ramp structure	$
	Total Bid Price	$

Total Bid Amount in Words: _____

Signature of Bidder Date

Printed Name of Bidder

Business Address

City, State, Zip Phone

ATTACHMENT A
WRITTEN SPECIFICATIONS

SECTION 02105
DEWATERING

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment, and supervision necessary to complete the work specified in this Section.

1.02 SCOPE OF WORK

A. Includes, but is not necessarily limited to the following
1. Construction of temporary dikes and/or cofferdams and pumping to dewater the area of boat ramp construction.

1.03 RELATED WORK

A. Related work specified elsewhere
1. Removal and disposal of existing piers and boat ramp under DEMOLITION, SECTION 02110
2. Construction of new boat ramp under HEAVY TIMBER CONSTRUCTION, SECTION 06130

1.04 QUALITY ASSURANCE

A. The Contractor shall comply with all applicable local, state, and federal requirements as well as standard industry standards and practices regarding materials, methods of work, proper disposal, trucking, removal of excessive waste and materials, safety of the workers and safety of the public.

PART 2 PRODUCTS

2.01 No materials are to be supplied under this Specification.

PART 3 EXECUTION

3.01 Construct temporary dike and/or cofferdam around area of proposed boat ramp to allow for dewatering.

3.02 Provide all pumps and equipment to dewater new boat ramp area. Keep excavation continuously free of water. Provide, maintain, and operate pumps and related equipment, including standby equipment of sufficient capacity to keep excavations free of all water during construction. Dispose of water within siltation curtains without causing erosion to surrounding area and as directed by the Owner. At completion of dewatering, remove temporary facilities and restore sub grade and damaged area.

SECTION 02110
DEMOLITION

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete the work specified in this Section.

1.02 SCOPE OF WORK

A. Includes, but is not necessarily limited to the following:
   1. Removal and disposal of:
      a. Timber decking, curb, stringers, pile caps and piles as designated on the drawings.
      b. Timber sheeting and Wales as designated by the drawings
      c. Miscellaneous hardware, steel angles, pieces of timber, rubble and other material which are encountered during the course of work which interferes with work specified to be done.
   2. Disassembly and reuse of
      a. Decking, stringers, pile caps and timber piles as designated on the drawings

1.03 RELATED WORK

A. Related work specified elsewhere
   1. Excavation of fill associated with existing boat ramp under EARTHWORK, SECTION 02200

1.04 SUBMITTALS

A. Contractor shall submit a detailed demolition plan including methods and means for collecting timber and fill material to prevent entry into the water.

B. Submit disposal sites for all materials.

C. Submit disposal slips for each load of material indicating date, time, location, weight and type of material.

PART 2 PRODUCTS

2.01 No materials are to be supplied under this specification.

PART 3 EXECUTION

3.01 Bidders shall examine the site and make their own estimates of the types and quantities of demolition which will be required to fulfill the Contract requirements.

3.02 All materials removed during demolition designated for disposal shall become the property of the Contractor unless otherwise noted.

3.03 All materials removed during demolition except that which is to be reused shall be disposed of off the site in conformance with all municipal, state and federal regulations, at the expense of the Contractor.

3.04 During over-water or in-water demolition activities, the area of the demolition work will be enclosed with a floating boom approved by the Owner. Materials retained by the boom shall be removed on a daily basis.

3.05 Contractor shall use extreme caution when demolishing structures. Damage caused to adjacent structures or structures to remain which are caused by the Contractor shall be repaired by the Contractor as directed by the Engineer at no additional cost to the Owner.

3.06 Saw cut existing timber sheeting and Wales at limits of demolition to provide straight and true lines as indicated.

3.07 Remove and transport debris and rubbish in a manner that will prevent spillage on pavements and streets or adjacent areas. Clean up spillage and debris daily.

3.08 Burning debris or materials on site is not permitted.

END OF SECTION

SECTION 02200
EARTHWORK

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete the work specified in this Section.

1.02 SCOPE OF WORK

A. Scope of work includes, but is not necessarily limited to the following:
   1. Excavation of fill material within existing boat ramp
   2. Backfilling and compaction of specified fill material within new boat ramp
   3. Placement of geotextile fabric and crushed stone
   4. Excavation, backfilling, and compaction of specified fill material around concrete deadman

1.03 RELATED WORK

A. Related work specified in other Sections:
   1. Demolition of existing boat ramp under DEMOLITION, SECTION 02110
   2. Construction of concrete deadman under REINFORCED CONCRETE, SECTION 03000
   3. Placement of riprap under RIPRAP, SECTION 02250
   4. Construction of temporary dikes and/or cofferdams and pumping to dewater area of boat ramp construction under DEWATERING, SECTION 02105

1.04 QUALITY ASSURANCE

A. Excepted as noted, work shall conform to the latest editions of the following codes, specifications, and standards:
   1. American Society for Testing and Materials (ASTM)

B. Soil testing and inspection service:
   1. Provide independent soil testing and inspection service for quality control testing during earthwork operations. All testing shall be performed by a firm specializing in soil testing and who is acceptable to the Owner.

1.05 SUBMITTALS

A. Name and address of testing service for approval by the Owner.

B. Test reports on excavating, filling and grading:
   1. Submit copies of the following reports directly to the Owner from the testing services:
      a. Test reports on borrow materials and crushed stone
      b. Field density test reports
      c. One optimum moisture-maximum density curve for each type of soil encountered.

1.06 TESTING

A. Testing during construction: Testing service must inspect and approve sub grades and fill layers before further construction work is performed thereon.

1. Maximum soil density shall be the density at optimum moisture as determined by ASTM Standard Methods of Test for Moisture-Density Relations of Soil Using 10-lb. Rammer and 18-in. Drop, Designation D 1557-78, using Method A, B, C, or D whichever is applicable.
2. The in-place soil density shall be determined in accordance with ASTM Standard Method of Test for Density of Soil in Place by the Sand-Cone Method, Designation D 1556-64 or ASTM Standard Method of Test for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (shallow depth), Designation D-2992-81.
3. Gradation Analyses shall be performed in accordance with the applicable sections of ASTM D422-63 Particle-Size Analysis of Soils.

B. If, in the opinion of the Owner, based on reports of testing service and inspection, sub grade or fills which have been placed are below specified density, provide additional compaction and testing at no additional expense to the Owner.

1.07 JOB CONDITIONS

A. Existing utilities: Locate existing underground utilities in the areas of work. If utilities are to remain in place, provide adequate means of protection during earthwork operations.

1. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult the Owner immediately for directions as to procedure. Cooperate with utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
2. Do not interrupt existing serving facilities occupied and used by others.

B. Use of explosives:

1. Use of explosives is prohibited.

C. Protection of persons and property: Barricade open excavations occurring as part of this work and post with warning lights. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

1. Protect structures, utilities, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

PART 2 PRODUCTS

2.01 MATERIALS

A. Gravel Fill: Gravel fill shall consist of inert material that is hard, durable stone and coarse sand, free of organic material, loam, trash, snow ice, frozen soil and other objectionable material and shall be well-graded within the following limits:

Sieve	Percent Passing
1/2 inch	50-85
No. 4	40-75

No. 50	8-28
No. 200	0-8

Maximum size of stone in gravel shall be as follows:

M1.03.0 Type a 6 inches largest dimension

B. Crushed Stone: Crushed stone shall consist of one or the other of the following material:

1. Durable crushed rock consisting of the angular fragments obtained by breaking and crushing solid or shattered natural rock, and free from a detrimental quantity of thin, flat, elongated, or other objectionable pieces.
2. Durable crushed gravel stone obtained by artificial crushing or gravel boulders or fieldstone with a minimum diameter before crushing of 8 inches.*
3. The crushed stone shall be reasonably free from clay, loam or deleterious material and not more than 1.0% of satisfactory material passing a No. 200 sieve will be allowed to adhere to the crushed stone.
4. Crushed stone shall be uniformly blended according to the following grading:

Sieve Size	Percent Finer by Weight
2	100
1-1/2	95100
1	35-70
¾	0-25

**Thin or elongated pieces are defined as follows*:
Thin stones shall be considered to be such stones whose average width exceeds four (4) times their average thickness. Elongated stones shall be considered to be such stones whose average length exceeds four (4) times their average width.

C. Geotextile Fabric: Shall be composed of polyester filaments which are formed into a stable network such that the filaments retain their relative position. The fabric shall be inert to commonly encountered chemicals and free of defects which affect its physical properties.

1. The geotextile fabric shall have the following minimum average roll values:
    a. Trapezoidal tear strength (ASTM D-4533) 140 lbs
    b. Mullen burst strength (ASTM D-4833) 575 psi
    c. Puncture strength (ASTM D-4833) 155 lbs
    d. Apparent opening size (ASTM D-4751) 100 U.S. Standard Sieve
2. Geotextile fabric shall be Trevira Spunbond Type 1145 as manufactured by Hoechst Celanese Corporation, Spartanburg, SC or approved equal.

PART 3 EXECUTION

3.01 EXCAVATION

A. Excavation consists of removal and disposal of materials encountered when establishing required grade elevations.

B. Perform all excavation of every description and of whatever substances encountered to the depths of extent indicated for the proper installation of the work.

C. Excavate to the exact depth required for all foundations, structures, and utility systems.

D. Earth excavation consists of removal and disposal of pavements and other obstructions visible on ground surface, underground structures and utilities indicated to be demolished and removed, material of any classification indicated in data on subsurface conditions.

E. Unauthorized excavation consists of removal of materials beyond indicated sub grade elevations or dimensions without specific direction of Owner.

1. Backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Owner.

F. Stability of excavations: Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible either because of space restrictions or stability of material excavated.

1. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

G. Shoring and bracing: Provide adequate shoring and bracing, such as sheet piling, uprights, stringers and cross-braces, in good serviceable condition.

1. Trench shoring and bracing shall comply with local codes and authorities having jurisdiction.
2. Maintain shoring and bracing in excavations, regardless of time period excavations will be open. Carry down shoring and bracing as excavation progresses.

H. Dewatering: Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.

1. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of sub grades and foundations. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

I. Excavation for structures: Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10', and extending a sufficient distance from foundations to permit placing and removal of concrete formwork, other construction required, and for inspection.

1. In excavating for foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete is placed. Trim bottoms to required lines and grades to leave solid base to receive concrete.

J. Demolition: Remove any existing concrete foundations, abandoned utility piping, pilings, timber and other debris encountered in areas of construction.

K. Excavated materials which meet specification requirements for gravel fill may be used as gravel fill. Separate and stockpile suitable excavated materials away from unsuitable materials.

L. Cold weather protection: Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.

3.02 COMPACTION

A. General: Control soil compaction during construction providing minimum percentage of density specified for each area classification. Tests of sub grades and fill layers will be taken as follows:

1. Backfill within new boat ramp and adjacent to concrete deadman, one field density test for each 1 foot change in elevation.

B. Percentage of maximum density requirements: Provide not less than following percentages of maximum density of soil material compacted at optimum moisture content, for the actual density of each layer of soil material-in-place.

1. All backfill to be compacted to 95% maximum density.

C. Moisture control: Where sub grade or layer of soil material must be moisture-conditioned before compaction, uniformly apply water to surface of sub grade, or layer of soil material, as needed to obtain optimum moisture content.

1. Remove and replace or scarify and air dry, soil material that is too wet to permit compaction to specified density. (Above Elevation +4.0 only)

3.03 BACKFILL AND FILL

A. General: Place acceptable soil material in layers to required sub grade elevations, for each area classification listed below:

1. Fill within new boat ramp shall be gravel fill and crushed stone as shown on the drawings..

B. Backfill excavations as promptly as work permits, but not until completion of the following:

1. Acceptance by the Owner of construction below finish grade.
2. Inspection, testing, approval, and recording locations of underground utilities.
3. Removal of concrete formwork.
4. Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Where temporary sheet piling is used cut off sheetpiling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
5. Removal of trash and debris.

C. Ground surface preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface (above Elevation 0.0 Mean Low Water) prior to placement of fills.

3.04 PLACEMENT AND COMPACTION

A. General: All compacted fill shall be placed in layers unless otherwise specified. Each layer shall be systematically compacted by a minimum of four coverage's with the equipment described below, to the density specified hereinbefore. Incidental compaction due to traffic by construction equipment will not be credited toward the required minimum four coverage's.

1. Compaction equipment in confined areas (within new boat ramp and adjacent to walls) shall be accomplished by hand-operated vibratory equipment or mechanical tampers as approved by the Owner.
2. In freezing weather, a layer of fill shall not be left in an uncompacted state at the close of a day's operations. Prior to terminating operations for the day, the final layer of fill, after compaction, shall be rolled with a smooth-wheeled roller to eliminate ridges of soil left by tractors, trucks and compaction equipment.

3. The Contractor shall not place a layer of compacted fill on snow, ice or soil that was permitted to freeze prior to compaction. Removal of these unsatisfactory materials will be required as directed by the Owner.

3.05 GRADING

A. General: Uniformly grade areas within limits of grading under this Section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

B. Compaction:

1. After grading, compact sub grade surfaces to the depth and percentage of maximum density for each area classification.

3.06 DUST CONTROL

A. During the progress of the work, the Contractor shall conduct his operations and maintain the area of his activities, including sweeping a sprinkling of roads as necessary, so as to minimize the creation and dispersion of dust. If the Engineer decides that it is necessary to use calcium chloride for more effective dust control, the Contractor shall furnish and spread the material, as directed, and without additional compensation

3.07 MAINTENANCE

A. Protection of graded areas: Protect newly-graded areas from erosion, and keep free of trash and debris.

1. Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances.

B. Reconditioning compacted areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.

3.08 DISPOSAL OF EXCESS AND WASTE MATERIALS

A. Remove all waste materials, including unacceptable and/or excess excavated material, trash and debris, from the Owner's property and legally dispose of it.

*** END OF SECTION ***

SECTION 02250
RIPRAP

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete the work specified in this Section.

1.02 SCOPE OF WORK

A. Riprap shore protection consisting of a stone armor layer, stone underlayer, and excavation as shown on the Contract Drawings and specified herein.

1.03 RELATED WORK

A. Section 02110 DEMOLITION

B. Section 02200 EARTHWORK

1.04 QUALITY ASSURANCE

A. Except as noted, work shall conform to the latest edition of the following codes, specifications and descriptions.

1. American Society for Testing and Materials (ASTM)
2. Installation of all work specified in this Section and associated work specified elsewhere will be performed by individuals who have had prior experience in installing this work. Contractor and/or subcontractors must show evidence of successful completion of similar and comparable work. Crew foremen must have experience as foremen for this type of construction.

1.05 SUBMITTALS

A. Contractor shall submit to the Owner copies of results for all required testing and also name and location of the supplier.

PART 2 PRODUCTS

2.01 MATERIALS

A. Stone Quality

1. Armour stone used in this work shall be sound, dense, hard and desirable stone of good quality and resistant to weathering and disintegration from the marine environment and freezing/thawing cycles. The rock shall have the physical properties required by ASTM C33 for quarry rock suitable for producing coarse aggregate for concrete and abrasion resistance in accordance with ASTM C88 and C535.
2. Armour stone shall have a density not less than 160 pounds per cubic foot as determined by the ASTM C127 test for apparent specific weight.

B. Armor Stone: Armor stone shall consist of sound durable rock or stone uniformly graded and conforming to the size requirements shown on the Drawings. The stone shall meet the following requirements:

Test	Requirement
Apparent Specific Gravity	2.50 min.
Absorption	2% max.
Sodium Sulfate Soundness	
(5 cycles)	5% max.
Los Angeles Abrasion Test	50% max. loss

Armor stone shall be of such shape as to form a stable protection structure for the required riprap sections. Rounded cobbles or boulders shall not be neither used nor flat or needle shapes, where the length of the individual pieces is greater than three times the thickness.

C. Geotextile Fabric: Shall be composed of polyester filaments which are formed into a stable network such that the filaments retain their relative position. The fabric shall be inert to commonly encountered chemicals and free of defects which affect its physical properties.

1. The geotextile fabric shall have the following minimum average roll values:
    a. Trapezoidal tear strength (ASTM D-4533) 140 lbs
    b. Mullen burst strength (ASTM D-4833) 575 psi
    c. Puncture strength (ASTM D-4833) 155 lbs
    d. Apparent opening size (ASTM D-4751) 100 U.S. Standard Sieve
2. Geotextile fabric shall be Trevira Spunbond Type 1145 as manufactured by Hoechst Celanese Corporation, Spartanburg, SC or approved equal.

PART 3 EXECUTION

3.01 SUBGRADE PREPARATION

A. The sub grade shall be shaped to a true surface conforming to the cross section shown. All depressions shall be filled with suitable material and high spots removed. A tolerance of 0.1 feet above or below the required finished sub grade line and grade will be allowed.

B. Geotextile fabric shall be placed in the manner, location, and configuration indicated. The fabric shall not be laid in a stretched condition, but shall be laid loosely. Adjacent panels shall be overcapped a minimum of 18 inches.

3.02 PLACEMENT OF STONE

A. Crushed stone shall be placed to the required thickness on the prepared sub grade as indicated on the drawings. The layer shall be placed to form a dense, stable layer.

B. Wrap crushed stone with geotextile fabric as shown on the drawings.

C. Armor stone shall be placed to the required thickness on the crushed stone a indicated on the drawings. Stone shall be placed uniformly so as to provide a flat, level surface. Voids shall be filled with smaller stone of the largest practical size an all loose stone shall be removed from their finished face.

D. The riprap shall be placed so as to avoid damage to geotextile fabric and timber sheeting.

END OF SECTION

SECTION 02311
ROUND TIMBER PILES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete work specified in this Section.

1.02 SCOPE OF WORK

A. Scope of work includes, but is not necessarily limited to, furnishing and installing timber piles.

1.03 RELATED WORK

A. Related work specified elsewhere includes:

1. Drift pins and bolts under HEAVY TIMBER CONSTRUCTION, SECTION 06130.
2. Pile treatment under TIMBER TREATMENT (CCA), SECTION 06310.

1.04 QUALITY ASSURANCE

A. Except as noted, work shall conform to the latest editions of the following codes, specifications and standards.

1. American Society for Testing and Materials (ASTM), Specifications: D25 Round Timber Piles.
2. American Institute of Timber Construction (AITC).

1.05 SUBMITTALS

A. Submit for approval by Owner proposals for following items:

1. Driving plan and schedule for installation of piles.
2. Method of installation of piles including size and type of pile hammer.
3. Templates and falsework to be used for support and layout of piles during driving.

B. AWPA quality stamp on each new treated pile.

C. Certification of timber pile species.

1.06 PRODUCT HANDLING

A. Piles shall be handled with care to prevent damage. Damaged piles will be rejected and replaced at no additional cost to the Owner. Piles shall be stored with a space beneath them and situated to prevent being exposed to standing water.

PART 2 PRODUCTS

2.01 MATERIALS

A. End-bearing piles: clean-peeled and treated West coast Douglas Fir or Southern Yellow Pine, meeting ASTM D25-91. Minimum butt circumference measured at 3 feet from the butt end shall be 38 inches.

PART 3 EXECUTION

3.01 DRIVING EQUIPMENT

A. Pile hammers: Air, steam or diesel-powered, of a type approved by the Owner. The hammer furnished shall have a capacity at least equal to the hammer manufacturer's recommendation for the total weight of pile and character of subsurface material to be encountered. The minimum driving energy of the hammer shall be 6500 foot-pounds. Diesel-powered hammers shall be operated at the rate recommended by the manufacturer throughout the entire driving period. Sufficient pressure shall be maintained at the hammer so that: (1) for double-acting hammer, the number of blows per minute during and at the completion of driving of a pile is equal approximately to that at which the hammer is rated; (2) for single-acting hammer, there is a full upward stroke of the ram; and (3) for differential-type hammer, there is a slight rise of the hammer base during each upward stroke.

B. Driving helmets and cushion blocks: Use a driving helmet or cap including a cushion block or cap block of a design approved by the Owner between the top of the pile and the ram to prevent impact damage to the pile. The driving helmet or cap and cushion block combination shall be capable of protecting the head of the pile, minimizing energy absorption, and transmitting hammer energy uniformly and consistently during the entire driving period. The driving helmet or cap shall fit snugly on the top of the pile so that the energy transmitted to the pile is uniformly distributed over the entire surface of the pile head. Demonstrate to the Owner that the equipment to be used on the project performs the above functions. The cushion block may be a solid or laminated softwood block with the grain parallel to the pile axis and enclosed in a close-fitting steel housing. The thickness of block shall be suitable for the length of pile to be driven and the character of subsurface material to be encountered. Generally, thicker blocks are required for longer piles and softer subsurface material. Replace cushion block if it has been damaged, split, highly compressed, charred or burned or has become spongy or deteriorated in any manner. Under no circumstances will the use of small wood blocks, wood chips, rope or other material permitting excessive loss of hammer energy be permitted.

3.02 HANDLING

A. Inspect piles in the leads, and where the protective shell or treated wood is impaired, between cutoff and a point which will be not less than 10 feet below the ground, the piles shall be repaired as specified under Timber Treatment unless the pile is damaged to such an extent that it is rejected. Rejected piles will be replaced at no additional cost to the Owner. Support pile laterally during driving, but not unduly restrained from rotation in the leads. Where pile orientation is essential, take special care to maintain the orientation during driving. Take special care in supporting battered piles to prevent excess bending stresses in the pile. When necessary, place collars around the pile head to prevent brooming. Cant hooks shall not be used in handling treated piles. Cut piles by sawing or other means approved by the Owner. Holes for rebar shall be of a size that will ensure a driving fit.

3.03 DRIVING PILES:

A. Drive pile to Elevation -35 MLLW without interruption.

B. Tolerances in Driving: Butts shall be within 4 inches of the location indicated. Manipulation of piles to force them into position will not be permitted. Check all piles for heave. Redrive heaved piles to the required elevation.

Piles damaged, mislocated, or driven out of alignment shall be replaced or additional piles driven as directed at no additional cost to the Owner.

3.04 INSTALLATION

A. All piles shall be marked at a given distance from the bottom, which will show above the waterline after driving, so that the bottom elevation of each pile and its relation with adjacent piles can be recorded.

3.04 RECORDS

A. A complete and accurate record of each pile shall be furnished by the Contractor. The record shall indicate the pile location, diameter, length, hammer (make and model), number of blows per 6" for the final 36 inches of penetration, all other pertinent information.

END OF SECTION

SECTION 03000
REINFORCED CONCRETE

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

A. Provide all labor, materials, equipment and supervision necessary to complete work specified in this section.

1.02 SCOPE OF WORK

A. Scope of work includes, but is not necessarily limited to, furnishing and installing the following:

1. Cast-in-place concrete
    a. Concrete deadman
    b. Wave barrier post

2. Precast Concrete
    a. Precast concrete slabs
3. Forms
4. Falsework for forms
5. Form ties
6. Reinforcing steel (epoxy coated)
7. Cutting and patching

1.03 RELATED WORK

A. Related work specified in other Sections:
    1. Backfilling and compaction under EARTHWORK, SECTION 03002.

1.04 REFERENCES

A. Except as noted, work shall conform to the latest edition of the following codes specifications and standards:
    1. American Society for Testing and Materials (ASTM)
    2. American Concrete Institute (ACI):
        a. "Building Code Requirements for Reinforced Concrete", ACI 318
        b. "Specifications for Structural Concrete for Buildings", ACI 301
        c. "Recommended Practice for Measuring, Mixing, and Placing Concrete", ACI 304.
        d. "Recommended Practice for Cold (Hot) Weather Concreting", ACI 306 and ACI 307.
        e. "Recommended Practice for Concrete Formwork", ACI 307.
    3. Concrete Reinforcing Steel Institute (CRSI):
        a. Reinforced Concrete - "A Manual of Standard Practice".
        b. "Recommended Practice for Placing Reinforcing Bars".
        c. "Recommended Practice for Placing Reinforcing Bars"
        d. "Guidelines for Inspection and Acceptance of Epoxy-Coated Reinforcing Bars at the Job Site."

1.05 SUBMITTALS

A. Shop Drawings

1. Reinforcing steel shop drawings
   a. shall be of such detail and completeness that all fabrication and placement at the site can be accomplished without the use of contract drawings for reference.
   b. shall include number of pieces, sizes, and grade of reinforcing steel, accessories, and any other information required for fabrication and placement.
   c. shall show joint layout and design

2. Contractor shall check structural, and site drawings for anchor bolts, anchors, inserts, conduits, sleeves, and any other items which are required to be embedded in concrete, and shall make necessary provisions as required so that reinforcing steel will not interfere with the placement of such embedded items.

B. Concrete mix designs.

C. Name and address of testing laboratory for approval by Owner.

1.06 QUALITY ASSURANCE

A. Testing of Concrete

1. Test Specimens: The Contractor will be required to make, cure and have tested a minimum of one set of four test specimens from the concrete of each day's pour and for each fifty cubic yards of concrete cast in accordance with ASTM Designations C172, C31 and C39. One cylinder shall be broken after seven days and three cylinders after twenty-eight day.
2. Slump: A slump test shall be made for each truckload of concrete in accordance with ASTM Designation C143. Slumps greater than design mix limit will be grounds for rejection of the concrete
3. Air Content: The Contractor shall make an air content test from each day's pour of concrete by the pressure method in accordance with ASTM Designation C231. Air contents above or below the limits specified will be grounds for rejection of the concrete.
4. Testing: All personnel and laboratories testing concrete shall be licensed by the Commonwealth of Massachusetts.
5. In the event the compressive strength of the cylinders, when tested, is below the specified minimum, the Owner may require test cores of the hardened structure to be taken by the Testing Laboratory in accordance with ASTM C-42. If such test indicates that the core specimen is below the required strength, the concrete in question shall be removed and replaced without cost to the Owner. Any other work damaged as a result of this concrete removal shall be replaced with new materials to the satisfaction of the Owner at no additional cost to the Owner. The cost of coring will be deducted from the contract amount. Where core cylinders have been taken by the Testing Laboratory and the concrete proves to be satisfactory, core holes shall be filled in a manner satisfactory to the Owner at no additional cost to the Owner.

B. The Contractor shall coordinate the date and location of tests with the Owner before any concrete work is started.

1.07 PRODUCT DELIVERY, STORAGE AND HANDLING

Reinforcing steel shall be transported to the site, stored, and covered in a manner which will ensure that no damage shall occur to it from moisture, dirt, grease, or any other cause that might impair bond to concrete or chip protective

epoxy coating. A sufficient supply of approved reinforcing steel shall be stored on the site at all times to ensure that there will be no delay of the work. Identification of steel shall be maintained after bundles are broken.

2.01 MATERIALS

A. Portland Cement: ASTM C 150, Type II of U.S. manufacture. Only one brand of cement shall be used on the project.

B. Aggregates:

1. Fine aggregate. ASTM C 33, clean and graded from 1/4 inch to fines.
2. Coarse aggregate. ASTM C 33, clean and graded from 1/4 inch to maximum sizes hereinafter specified.

C. Air Entraining Agent
Conforming to ASTM C 260 for Air-Entraining Admixtures for Concrete

D. Water Reducing Agent
Conforming to ASTM C 494 Type A for Chemical Admixtures for Concrete

E. Water
Clean and potable, free of impurities detrimental to concrete

F. Reinforcing Bars
New, deformed billet steel bars, conforming to ASTM A 615, Grade 60, with Epoxy-Coating conforming to ASTM A775/A775M.

G. Accessories
Reinforcement accessories, consisting of spacers, chairs, ties, and similar items shall be provided as required for spacing, assembling, and supporting reinforcement in place. All accessories shall be dielectric coated steel or approved plastic accessories, conforming to the applicable requirements of the CRSI Standards hereinbefore specified.

H. Tie wire for reinforcement shall be 16 gauge or heavier dielectric coated steel or approved plastic accessories, conforming to the applicable requirements of ASTM A-82.

I. Form Ties and Spreaders
Standard metal form clamp assemble and plastic cone, of type acting as spreaders and leaving no metal within 1 inch of concrete face. Inner tie rod shall be left in concrete when forms are removed. No wire ties or wood spreaders will be permitted. Use 1/2" x 1" C.T. plastic cones for sinkages

J. Form Coatings
Non-grain raising and non-staining type that will not leave residual matter on surface of concrete or adversely affect proper bonding of subsequent application of other material applied to concrete surface, "Nox-Crete Form Coating" as manufactured by Nox-Crete Company, or approved equal. Coating containing mineral oils or the non-drying ingredients will not be permitted.

K. Stainless steel straps, bolts, washers, and nuts shall be Type 18-8 (300 Series) conforming to ASTM Specification A193. Threading of nuts and bolts shall be coarse-thread series (UNC).

2.02 CONCRETE STRENGTHS AND PROPORTIONS

A. Cast-in-place concrete shall have the following minimum compressive strength at 28 days and shall be proportioned within the following limits:

Class	Minimum Strength at 28 days	Maximum Size of Aggregate
A	4000 psi	3/8"

B. The exact proportions for the mix, including amounts admixture (if any), and water, shall be determined by the concrete supplier.

C. The proportions of aggregate to cement for any concrete shall be such as to produce a mixture which will work readily into the corners and angles of the forms and around reinforcement with the method of placing employed, but without permitting the materials to segregate or excess free water to collect on the surface.

D. Air-Entrainment
The air content in all concrete shall be maintained at 5 to 7 percent.

PART 3 - EXECUTION

3.01 CAST-IN-PLACE CONCRETE

A. Falsework for Forms
1. The contractor shall build and maintain necessary falsework for the forms.

B. Construction of Forms
1. General
a. Wood forms shall be constructed of sound material, shall be of the correct shape and dimensions, mortar tight, of sufficient strength, and so braced and tied together that the movement of men, equipment, materials, or placing and vibrating the concrete will not throw them out of line or position.
2. Embedded Items
a. Provisions shall be made for pipes, sleeves, anchors, inserts, reglets, anchor slots, nailers, waterstops and other features. No wood other than necessary nailing blocks shall be embedded in concrete. Complete cooperation shall be extended suppliers of embedded items in their installation. Secure information for embedded items from other trades as required. All embedded items shall be securely anchored in correct location and alignment prior to placing concrete.
3. Openings for Items Passing Through Concrete
a. Contractor shall establish exact locations, sizes, and other conditions required for openings and attachment of work specified under other sections. Contractor shall be held responsible for proper coordination of all work of this nature in order that there will be no unnecessary cutting and patching of concrete. Any cutting and repairing to concrete required as a result of failure to provide for such openings shall be paid for by the Contractor at no additional expense to the Owner.

C. Removing Forms and Falsework

1. Wood forms shall not be removed for at least 72 hours after concrete has been placed.
2. Forms shall not be removed until the concrete has attained sufficient strength to insure stability.

D. Reinforcing Steel

1. General

Reinforcing steel shall be placed in accordance with the drawings and approved shop drawings and the applicable requirements of the "Codes and Standards" here-in-before specified. Install reinforcement accurately and secure against movement, particularly under the weight of workmen and the placement of concrete.

2. Reinforcing Steel Supports

Bars shall be supported on approved plastic or dielectric-coated metal chairs or spacers, accurately placed and securely fastened to forms or steel reinforcement in place. Additional bars shall be supplied, whether specifically shown on the drawings or not, where necessary to securely fasten reinforcement in place. Support legs of accessories in forms without embedding in form surface. Spacing of chairs and accessories shall conform with CRSI's "Recommended Practice for Placing Bar Support". Hooping and stirrups shall be accurately spaced and wired to the reinforcement. No wood will be permitted inside forms. Lifting of welded wire fabric into proper position while concrete is being poured rather than supporting fabric on chairs will not be permitted.

3. Placing and Tieing

All reinforcement shall be set in place, spaced, and rigidly and securely tied or wired with tie wire at all splices and at all crossing points and intersections in the positions shown, or as directed. Rebending of bars on the job to accommodate the job to accommodate existing conditions will not be permitted without the written approval of the Owner. Points ends of wire ties away from forms.

4. Spacing

Minimum center to center distance between parallel bars shall be in accordance with the details on the drawings, or, where not shown, the clear spacing shall be 2 times the bar diameter but in no case less than 1-1/2 inches or less than 1-1/2 times the maximum size aggregate.

5. Splices shall be in accordance with ACI 318-95
6. Protective Concrete covering

a. Except where shown otherwise on drawings, the minimum concrete coverage for steel reinforcement shall conform with the applicable revisions of the "Codes and Standards" here-in-before specified.

E. Mixing of Concrete

1. All concrete shall be ready-mixed concrete, and shall be mixed and delivered in accordance with the "Specification for Ready-Mixed Concrete", ASTM C-94. The batch plant of the concrete producer shall be certified for compliance with the standards established by the National Ready-Mixed Concrete Association.
2. In the event concrete is mixed at a central batching plant, the delivery shall be arranged so that intervals between batches are kept to a minimum, and in any event not more than thirty (30) minutes. Trucks shall be in first class condition and kept in constant rotation during delivery.
3. Concrete shall be placed within 90 minutes after cement has been mixed with aggregate or 45 minutes after addition of water and admixtures.
4. No admixtures, except those mentioned in paragraph 2.1 shall be used. Calcium chloride will not be permitted.

5. Truck delivery slips of all concrete delivered to the job shall indicate the quantity and quality of concrete, additives, date and time of batching and delivery, and the location of placement. Delivery slips shall be forwarded to the Owner at the end of each week.

F. Cold Weather Requirements:

1. Concrete shall not be mixed or placed when the temperature is below 40 degrees F., or when conditions indicate that the temperature will fall below 40 degrees F. within 72 hours unless precautions are taken to protect the concrete.
2. Concrete temperature shall be maintained, when deposited, at not less than 60 degrees F. Reinforcement, forms, and ground which concrete will contact must be completely free of frost.
3. Concrete and formwork must be kept at a temperature of not less than 50 degrees F. for not less than 96 hours after placing.
4. Calcium chloride shall not be used.

Hot Weather Requirements:

1. The maximum temperature of the concrete, when deposited, shall be 85 degrees F. If the weather causes the placing temperature to exceed 85 degrees F., the mix shall be cooled by appropriate methods if approved by the Owner.
2. No concrete shall be deposited when the air temperature is greater than 90 degrees F.

G. Conveying and Placing Concrete

1. Notification
   a. Before placing concrete, forms shall be thoroughly inspected. All chips, dirt, etc., shall be removed, all temporary bracing and cleats taken out, all openings for pipes, etc., properly boxed, all forms properly secured in their correct position and made tight, all reinforcement, anchors, and embedded items secured in their proper places. Concrete which may be on the forms or reinforcement, and which is set and dry, shall be cleaned off, and the forms and steel washed off before proceeding. Remove all foreign matter from forms and excavations.
2. Water shall be removed from place of deposit before concrete is placed unless otherwise permitted by the Owner. Any flow of water into an excavation shall be diverted through proper side drains into a sump, or shall be removed by other approved methods which will avoid washing away the freshly deposited concrete.
3. Soil on which concrete will be poured shall be thoroughly wetted (except in freezing weather).
4. Anchors and Embedded Items
   a. Anchors, bolts, sleeves, inserts, wood blocking, and any other items to be embedded in concrete shall be accurately secured in position before the concrete is placed. Aluminum shall not be embedded in concrete.
5. Handling and Depositing
   a. Before any concrete is placed, the Contractor shall notify all whose work is in any way connected with or influenced by the concrete work, and give them reasonable time to complete all portions of their work that must be completed before concrete is deposited.
   b. Immediately before concrete is placed, the Contractor shall inspect all forms to be sure that they are in proper position, sufficiently rigid, thoroughly clean, properly oiled and free from foreign materials, and that all reinforcement is in proper position.
   c. Concreting, once started, shall be carried on as a continuous operation until the section of approved size and shape is completed.
   d. Concrete shall be conveyed as rapidly as practicable from the mixer to the place of final deposit by methods which prevent the separation or loss of ingredients. It shall be deposited, as nearly as practicable, in its final position to avoid rehandling or flowing.

e. Concrete shall not be dropped freely where reinforcement will cause segregation, nor shall it be dropped freely more than six (6) feet. Concrete shall be deposited to maintain a plastic surface approximately horizontal.

f. Concrete that has partially hardened shall not be deposited in the work.

7. Pumping

a. Concrete may be placed by pumping if first approved in writing by the Owner for the location proposed.

b. Equipment for pumping shall be of such size and design as to ensure a practically continuous flow of concrete at the delivery end without separation of materials.

c. The concrete mix shall be designed to the same requirements as herein before specified, and may be richer in lubricating components in order to allow proper pumping.

d. Concrete shall not be pumped through aluminum pipes.

e. All pumping operations must have full-time inspection by a recognized testing laboratory approved by the Owner and paid for by the Contractor. The cost of this full-time inspection shall be included in the contractor's bid proposal if the option of pumping is elected.

8. Vibrating and Compacting

a. All concrete shall be thoroughly consolidated and compacted by suitable means during the operation of placing, and shall be thoroughly worked around reinforcement, embedded items, and into the corners of the forms. All concrete against forms shall be thoroughly spaded. Internal vibrators shall be used under experienced supervision, and shall be kept out of contact with reinforcement and wood forms. Vibrators shall not be used in a manner that forces mortar between individual form members.

b. Vibrators shall be flexible electric type or approved compressed air type, adequately powered and capable of transmitting to the concrete not less than seven thousand (7,000) impulses per minute. Vibration shall be sufficiently intense to cause the concrete to flow or settle readily into place without separation of the ingredients. A sufficient number of vibrators shall be employed so that complete compaction is secured throughout the entire volume of each layer of concrete. At least one (1) vibrator shall be kept in readiness as a spare for emergency use. Vibrators shall be such that the concrete becomes uniformly plastic with their use.

c. Vibration shall be close to the forms but shall not be continued at one spot to the extent that large areas of grout are formed or the heavier aggregates are caused to settle. Care shall be taken to not disturb concrete which has its initial set.

d. Where conditions make compacting difficult, or where the reinforcement is congested, batches of mortar containing the same proportions of cement to sand as used in the concrete shall first be deposited in the forms, to a depth of at least on inch.

e. The responsibility for providing fully filled out, smooth, clean, and properly aligned surfaces free from objectionable pockets shall rest entirely with the Contractor.

H. Patching

Immediately after stripping forms, patch minor defects, form-tie holes, honeycombed areas, etc., before concrete is thoroughly dry. Repair gravel pockets by cutting out to solid surface, form key, and thoroughly wet before placing patching mortar consisting of 1 part cement to 2 parts fine sand; compact into place and neatly finish. Honeycombed areas or gravel pockets which, in the Owner's opinion are too large and unsatisfactory for mortar patching as described above, shall be cut out to solid surface, keyed, and packed solids with matching concrete to produce firm bond and surface.

1. The Contractor shall do all the cutting as required by himself or other trades. All such work shall be of the minimum size required. No excessive cutting will be permitted, nor shall any structural members or reinforcement be cut.

2. The Contractor shall do all patching after work by other trades has been installed, where required, using Portland Cement Mortar 1:2 mix.

I. Protection and Curing

1. Protect concrete from injurious action of the elements and defacement of any nature during construction operations.

2. Keep concrete in a thoroughly moist condition from the time it is placed until it has cured, for at least (7) days.

3. Carefully protect exposed concrete corners from damage.

4. Allow no slabs to become dry at any time until curing operations are complete. In general, slabs shall be cured with non-staining curing paper, hosing or fog spray; vertical surfaces shall be curing with Burlene or fog spray or an approved curing compound. Protect fresh concrete from drying winds, rain, damage, or spoiling. Curing paper shall be lapped 4 inches minimum at joints and sealed with waterproof tape.

J. Concrete Finishes

1. Unexposed Surfaces

   a. All unexposed surfaces shall have any form finish, at the Contractor's option.

2. Wearing Surface Finish for Concrete Deadman

   a. Float the surface by hand using a wooden or magnesium float. Finish with a flexible bristle broom. Permit surface to harden sufficiently to retain the scoring or ridges. Broom transverse to traffic or at right angles to the slope of the slab.

3. Wearing surface for precast concrete slabs shall be V-grooves of size and orientation shown on the drawings.

4. Addition of Material

   a. The addition of cement, sand, water, or mortar to slab surfaces while finishing concrete is strictly prohibited.

K. Defective Work

1. The following concrete work shall be considered defective and may be ordered by the Owner to be removed and replaced at Contractor's expense:

   a. Incorrectly formed.
   b. Not plumb or level.
   c. Not specified strength.
   d. Containing rock pockets, voids, honeycomb, or cold joints.
   e. Containing wood or foreign matter.
   f. Otherwise not in accordance with the intent of the Drawings and Specifications.

END OF SECTION

SECTION 05500
METAL FABRICATIONS

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete work specified in this Section.

1.02 SCOPE OF WORK

A. Scope of work includes, but is not necessarily limited to

1. Fabrication and installation of tie rod connection plates, angles, wave barrier posts, tie rods and turnbuckles

1.03 RELATED WORK

A. Related work specified elsewhere:
1. Cleaning and coating of steel under COATINGS, SECTION 09800.
2. Hardware under HEAVY TIMBER CONSTRUCTION, SECTION 06130.

1.04 QUALITY ASSURANCE

A. Except as noted, work shall conform to the following codes and standards:
1. American Society for Testing and Materials (ASTM), latest edition.
2. American Institute of Steel Construction (AISC) Specification for the Design, Fabrication and Erection of Structural Steel for Buildings, latest editions.
3. American Welding Society (AWS).

1.05 SUBMITTALS

A. Shop drawings
1. Submit for approval prior to fabrication all information necessary for the fabrication of the component parts. Indicate size and weight of members, type and location of shop and field connections, the type, size and extent of all welds, and welding sequences. Use American Welding Society welding symbols. Approval of shop drawings will be for size and arrangement of principal and auxiliary members and strength of connections. Any errors in dimensions shown on shop drawing shall be the responsibility of the Contractor.

B. The Contractor shall use only certified welders and the shielded arc process for all welding performed in connection with the work of this Section. Each welder shall be certified for the particular work, prior to commencing the work, which must be accomplished.
C. Completed welds will be subject to inspection and approval of an independent testing agency. Faulty welds shall be cut out and replaced at no cost to the Owner.
D. Upon completion of this portion of the work, and as a condition of its acceptance, the Contractor shall deliver to the Engineer a letter signed by an official of the miscellaneous metal fabricating firm or firms certifying that all fabricated metal has been fabricated in complete accordance with this Section of these specifications.

1.06 PRODUCT HANDLING

A. All materials shall be delivered, stored and handled so that they are not damaged.

PART 2 MATERIALS

2.01 STRUCTURAL STEEL

A. Structural steel, including rolled shapes and plates, shall conform to ASTM A36.

B. Turnbuckles shall conform to ASTM A668.

2.02 WELD ELECTRODES

A. Weld rod shall conform to AWS E70XX grade.

PART 3 EXECUTION

3.01 FABRICATION

A. Fabricate products in a fully equipped facility capable of producing high grade of metal fabrication work. All work shall be straight and true, free from warppage and other defects. Joints, covers, copes and miters shall be accurately and neatly cut, machined, filed and fitted.

B. Carry out bolting and welding in accordance with latest approved methods, with due consideration for strength and appearance of finished product. All welding shall be done by certified welders.

C. All steel will be free from imperfections, dirt, loose scale, paint, oil or other foreign substances.

D. All welds shall be made watertight.

E. All material shall be fabricated to within + or - 1/8 inch of their theoretical dimensions as shown on the drawings.

F. Holes for bolts shall be located as shown on the drawings and shall be drilled 1/8" in diameter larger than the galvanized bolt.

G. All fabrication shall be coated as specified under COATINGS, SECTION 09800 unless otherwise noted.

3.02 INSTALLATION

A. Store materials on skids, not on ground, in such a fashion as to prevent bending, twisting or similar damage. Do not dump steel off truck.

B. Clean installed work from weld spatter, dirt and other foreign materials. Protect installed work as required from damage by subsequent building operations.

3.03 DEFECTIVE WORK

A. Any parts damaged or improperly fabricated shall be removed and replaced or corrected as directed by the Engineer and at no additional cost to the Owner.

END OF SECTION

SECTION 06130
HEAVY TIMBER CONSTRUCTION

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete the specified work in this Section.

1.02 SCOPE OF WORK

A. Scope of work includes but is not necessarily limited to the following:
1. Construction of two timber piers
2. Construction of new tied back timber sheetpile boat ramp
3. Construction of new cantilever timber sheet pile retaining wall with timber gate.

1.03 RELATED WORK

A. Work specified elsewhere:
1. Demolition of existing timber timber piers and timber sheeting under DEMOLITION, SECTION 02110.
2. Installation of new timber piles under ROUND TIMBER PILES, SECTION 02311.
3. Installation of tie rods, turnbuckles, connection plates, angles, and wave barrier posts under METAL FABRICATIONS, SECTION 05500.
4. Treatment of timber members under TIMBER TREATMENT, SECTION 06310.

1.04 QUALITY ASSURANCE

A. Except as noted all work shall conform to the latest editions of the following codes, specifications and standards:
1. Southern Pine Inspection Bureau (SPIB)
2. West Coast Lumber Inspection Bureau (WCLIB)
3. Western Wood Products Association (WWPA)
4. National Forest Products Association (NFPA)
5. American Society for Testing and Materials (ASTM)
6. Commonwealth of Massachusetts State Building Code (CMSBC)
7. American Institute of Timber Construction (AITC)

1.05 SUBMITTALS

A. AWPA quality certification on all treated timber.

B. Certification of timber species.

C. Certificate of Compliance for hardware and galvanizing.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. All timber shall be stored in stacks such that there is an air space beneath the material and situated to prevent the timber from being exposed to standing water.

B. The material shall be stored on site in an area which will be designated by the Owner.

C. Timber shall be handled in an approved manner such that the material will not be damaged.

PART 2 PRODUCTS

2.01 MATERIALS

A. All timber to be used for caps, stringers, decking, sheeting, wales, curb, spacer blocks, and splice blocks, and gate shall be No. 2 Southern Pine as graded by SPIB and with design values per NFPA National Design Specification or the equivalent.

B. All timber shall be new and dimensional (S4S) as indicated by nominal sizes on contract drawings.

C. Hardware

Bolts with necessary nuts and washers, lag bolts, drift pins, deck screws, deck spikes, and other fastenings. Bolts and nuts shall conform to ASTM A307. Provide washers, cast-iron ogee, malleable iron, or plate or cut washers where indicated. Provide bolts with washers under nut and head. Provide timber connectors and other metal fastenings and plates of type and size shown. Hot dip galvanize all hardware.

1. Zinc Coating

Galvanize steel specified or indicated by the hot-dip process in accordance with ASTM A123 and ASTM A153 as applicable.

PART 3 EXECUTION

3.01 PREPARATION

A. Prior to installation all demolition affecting the new work shall have been completed.

3.02 INSTALLATION

A. Coat ends of field cut members, and holes cut or drilled in timber as specified under TIMBER TREATMENT, SECTION 06310.

B. Joints are to be square, tight and well-fastened with all members assembled in accordance with the Contract Drawings.

C. Holes for bolts shall be drilled the same size as the bolt after galvanizing. Holes shall be swabbed with 2 coats of sealing compound as specified herein before installing the bolts.

D. Bolts shall be tightened to provide a solid connection. No more than 1 washer shall be installed under the bolt head or nut. Bolt threads shall project no more than 2" beyond the nut.

E. All timber shall be cut and fit in such a manner as to have full bearing over the entire contact surface.

F. Repair and recoat zinc coating which ha been field or shop cut, burned by welding, abraded or otherwise damaged to such an extent as to expose the base metal. Thoroughly clean the damaged area by wire brushing and remove all traces of welding flux and loose or cracked zinc coating prior to painting. Paint cleaned area with two coats of zinc oxide-zinc dust paint.

END OF SECTION

SECTION 06310
TIMBER TREATMENT
(CCA)

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete the work specified in this Section.

1.02 SCOPE OF WORK

A. Scope of work includes:
1. The treatment of timber members with a wood preservative.
2. The field application of all timber subject to field cutting and drilling.

1.03 RELATED WORK

A. Related work specified elsewhere:
1. Timber under HEAVY TIMBER CONSTRUCTION, SECTION 06310.
2. Piles under ROUND TIMBER PILES, SECTION 02311.

1.04 QUALITY ASSURANCE

A. Except as noted all work shall conform to the latest editions of the following codes, specifications and standards.
1. American Society for Testing and Materials (ASTM) D-25.
2. American Wood Preservatives Association (AWPA).

PART 2 PRODUCTS

2.01 MATERIALS

A. All new Southern Yellow Pine and Douglas Fir timber members shall be treated with chromated copper arsenate (CCA) or anmonical copper zinc arsenate (ACZA) in accordance with AWPA Standard P5 and C2 for material subject to marine borer exposure and shall obtain a green tint due to the treatment.

B. All new Southern Yellow Pine and Douglas Fir piles shall be treated with chromated copper arsenate (CCA) or anmonical copper zinc arsenate (ACZA) in accordance with AWPA Standards P5 and C4 for marine piles and shall obtain a green tint due to the treatment.

PART 3 EXECUTION

3.01 Prior to treatment all dimension lumber shall be kiln-dried. Conditioning by heating is not permitted.

3.02 All timber piles and timber sheeting shall be treated to a retention of 2.5 pounds per cubic foot of chromated copper arsenate or anmonical copper zinc arsenate.

3.03 All other timber and lumber shall be treated to a retention of 1.5 pounds per cubic foot of chromated copper arsenate.

3.04 Sealing compound for treatment of field cuts and drilled holes shall be two (2) coats of copper naphthenate with a minimum 2% copper meeting AWPA standard M4.

END OF SECTION

SECTION 09800
COATINGS

PART 1 GENERAL

1.01 DESCRIPTION

A. Provide all labor, materials, equipment and supervision necessary to complete the work specified in this Section.

1.02 SCOPE OF WORK

A. Scope of work includes but is not necessarily limited to the following:
   1. Tie rod connection plates, angles, and wave barrier posts
   2. Anchor rods and turnbuckles.

1.03 RELATED WORK

A. Work specified elsewhere
   1. Steel fabrication under METAL FABRICATION, SECTION 05500.

1.04 QUALITY ASSURANCE

A. Except as noted, all work shall conform to the latest editions of the following specifications and standards.
   1. Steel Structures Painting Council (SSPC): Surface Preparations Specifications, specifications and standards herein referred to.
   2. American Society for Testing and Materials (ASTM): specifications and standards herein referred to.

1.05 SUBMITTALS

A. Manufacturer's literature and recommended application instructions. Certification that materials meet specification requirements.

1.06 FIELD TESTING

A. Coatings may be inspected by the Owner using holiday detectors, field adhesion test, or a combination of both.

PART 2 PRODUCTS

2.01 MATERIALS

A. Coating on tie rod connection plates, angles, and wave barrier posts and all field welded or damaged areas shall be a high solids epoxy coating.
B. Coating on tie rods and turnbuckles shall be hot-applied coat tar coating in tape form.

PART 3 EXECUTION

3.01 SHOP SURFACE PREPARATION

A. General

1. All surfaces shall be thoroughly prepared for coating application in strict accordance with the coating manufacturer's recommendation. All cleaning and coating work must be performed in a heated building. Preceding grit blasting, steel must be heated to at least 100 degrees F. to eliminate possibility of moisture on the surfaces to be cleaned and coated.

2. Grit blasting shall be to clean grey metal, at least equivalent to a Near White as defined by SSPC Specification SP-10. All work blasted in one day must be coated on that day.

3. Any areas of the surface which show traces of oil, grease, or other organic matter shall be removed prior to coating. The contamination shall be removed by using either a solvent or spot-blasting.

4. All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit and the time the coating is applied.

5. The Owner's representative shall have access to each part of the process and shall have the right but not the obligation to witness any of the quality control test and/or perform such test himself on a random sampling basis.

3.02 APPLICATION OF COATING

A. High Solids Epoxy (Shop Coat)

1. All coating shall be applied by brush or spray using commercially available spray equipment. The coatings shall exhibit reasonable leveling without excessive sagging when applied at the required film thickness. Proper adhesion between coats shall be ensured, depending on method of coating application, without undue restrictions concerning timing, temperature or other conditions associated with application. Coating manufacturer's recommendations shall be adhered to. The temperature of the coating shall be within 15 degrees F. of the temperature of the steel at the time of application of the coating.

2. Where coating on any type of surface has commenced, the complete coating operation, including priming and finishing coats when multiple coats are used on that portion of the work, shall be completed as soon as practicable, without prolonged delays. Where necessary, sufficient time shall elapse between successive coats to permit them to dry properly for recoating and this period shall be modified as necessary to suit curing conditions.

3. Coating Thickness

   a. A minimum thickness (not average) of 16 mils dry film is required on all surfaces to be coated.

   b. Where two coats are required to achieve the recommended film build, the interval between coats should be as short as possible. To ensure maximum intercoat adhesion, it is recommended that:

      1) The next coat shall be applied as soon as possible after the previous coat has undergone final curing.

      2) If the previous coat has cured for more than the recoat time specified by the manufacturer, wash with fresh water, then brush blast to provide an adequate mechanical bond before recoating.

4. Final Curing Time

   a. Coated surfaces shall be permitted as long a drying time as practicable but in any event the minimum requirements shall be in accordance with the coating manufacturer's recommendations.

5. Thinning: Whenever possible the material shall be applied without thinning. Where thinning must be done, it shall be as recommended by the coating manufacturer. If the material is thinned, it may be

necessary to apply more than the standard 1 or 2 coats to attain the required minimum (not average) dry film thickness of 16 mils.

6. Appearance of Finished Coating

a. The finished coating shall be generally smooth and free of sharp protuberances which could be removed by abrasion. A minor amount of sags, dimpling, or curtaining which does not exceed 2 to 3 percent of the surface will not be considered cause for rejection unless they present sharp edges which might be removed by abrasion.

b. Sharp protuberances shall be cut off using a sharp wood chisel laid flat against the surface. The area from which material has been removed shall be recoated to smooth the surface.

3.03 FIELD SURFACE PREPARATION

A. Field surface preparation and coating shall only take place on items requiring field assembly or touch up including:

1. Tie rods and turnbuckles
2. Weldments, scraps, chips and areas where coating has been damaged.

B. Grind, wire brush, or, otherwise clean to grey metal. Work to be at least equivalent to Power Tool Cleaning as defined by SSPC specification SP-3. All work cleaned must be coated on that day.

C. Traces of oil, grease, or other organic matter on areas of the surface shall be removed prior to coating. The contamination shall be removed by using either a solvent or spot blasting.

D. All surfaces to be coated must be completely dry, free of moisture, soil, dust and grit at the time the coating is applied.

E. Contractor to follow coating manufacturer's recommendations for primer coating of anchor rods and turnbuckles.

3.04 FIELD COATING

A. General

1. Hot-applied coal tar tape coating shall be applied in accordance with manufacturer's recommendations.
2. After coated items have been installed, field coat all accessible areas which have been scraped or chipped.

B. Epoxy Coating

1. The touch up of High Solids Epoxy coating shall be with the same High Solids Epoxy coating system utilized during shop coating and with the same coating manufacturer.
2. Application of field coating shall be as recommended by the manufacturer and curing criteria prior to installation shall be strictly adhered to.

C. Hot applied coal tar tape coating touch up

1. The touch up of coal tar tape coating shall be with the same coal tar tape coating utilized during field coating and with the same coating manufacturer.
2. Application of touch up shall be as recommended by the manufacturer and curing criteria prior to installation shall be strictly adhered to.

3.05 CARE OF EXISTING WORK

A. Existing work shall be protected from spillage and spattering during application of coatings.

B. All spillages and spatterings shall be cleaned up immediately. Contractor is responsible to leave existing areas free of all such foreign materials.

3.06 DEFECTIVE MATERIALS

A. Coating which in the opinion of the Engineer does not meet acceptance shall be redone at no additional cost to the Owner.

END OF SECTION

MITT ROMNEY
Govenor
KERRY HEALEY
Lt. Govenor

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF LABOR
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

JOHN S. ZIEMBA
Director
ROBERT J. PREZIOSO
Commissioner

Awarding Authority: TOWN OF NANTUCKET
Contract Number: 2006-20 **City/Town:** NANTUCKET
Description Of Work: CHILDREN'S BEACH BOAT RAMP RECONSTRUCTION
Job Location: HARBOR VIEW WAY

Classification	Effective Dates and Total Rates							
(2 AXLE) DRIVER - EQUIPMENT	8/1/2006	$38.230	12/1/2006	$38.930	6/1/2007	$39.430	8/1/2007	$39.930
	12/1/2007	$40.630	6/1/2008	$41.130	8/1/2008	$41.630	12/1/2008	$42.330
(3 AXLE) DRIVER - EQUIPMENT	8/1/2006	$38.300	12/1/2006	$39.000	6/1/2007	$39.500	8/1/2007	$40.000
	12/1/2007	$40.700	6/1/2008	$41.200	8/1/2008	$41.700	12/1/2008	$42.400
(4 & 5 AXLE) DRIVER - EQUIPMENT	8/1/2006	$38.420	12/1/2006	$39.120	6/1/2007	$39.620	8/1/2007	$40.120
	12/1/2007	$40.820	6/1/2008	$41.320	8/1/2008	$41.820	12/1/2008	$42.520
ADS/SUBMERSIBLE PILOT	8/1/2006	$89.860	8/1/2007	$98.260				
AIRTRACK OPERATOR	6/1/2006	$37.000	12/1/2006	$38.100	6/1/2007	$39.250	12/1/2007	$40.350
	5/31/2008	$40.850						
ASBESTOS WORKER (PIPES & TANKS)	6/1/2006	$32.550						
ASPHALT RAKER	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	6/1/2006	$50.890	12/1/2006	$52.290	6/1/2007	$53.290	12/1/2007	$54.690
BACKHOE/FRONT-END LOADER	6/1/2006	$50.890	12/1/2006	$52.290	6/1/2007	$53.290	12/1/2007	$54.690
BARCO-TYPE JUMPING TAMPER	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
BLOCK PAVER, RAMMER / CURB SETTER	6/1/2006	$37.000	12/1/2006	$38.100	6/1/2007	$39.250	12/1/2007	$40.350
	5/31/2008	$40.850						
BOILERMAKER	10/1/2005	$48.170						
BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	8/1/2006	$59.040	2/1/2007	$60.690				
BULLDOZER/GRADER/SCRAPER	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
CAISSON & UNDERPINNING BOTTOM MAN	6/1/2006	$40.550	12/1/2006	$41.650	6/1/2007	$42.800	12/1/2007	$43.900
	5/31/2008	$44.400						
CAISSON & UNDERPINNING LABORER	6/1/2006	$39.600	12/1/2006	$40.700	6/1/2007	$41.850	12/1/2007	$42.950
	5/31/2008	$43.450						
CAISSON & UNDERPINNING TOP MAN	6/1/2006	$39.600	12/1/2006	$40.700	6/1/2007	$41.850	12/1/2007	$42.950
	5/31/2008	$43.450						
CARBIDE CORE DRILL OPERATOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
CARPENTER	9/1/2006	$52.420	3/1/2007	$53.570	9/1/2007	$54.720	3/1/2008	$55.870
	9/1/2008	$57.020	3/1/2009	$58.170				
CEMENT MASONRY/PLASTERING	8/1/2006	$58.230	1/1/2007	$58.460	2/1/2007	$59.730	7/1/2007	$59.950
	1/1/2008	$60.180	7/1/2008	$60.410	1/1/2009	$60.630		
CHAIN SAW OPERATOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES	6/1/2006	$51.890	12/1/2006	$53.290	6/1/2007	$54.290	12/1/2007	$55.690
COMPRESSOR OPERATOR	6/1/2006	$42.260	12/1/2006	$43.330	6/1/2007	$44.080	12/1/2007	$45.150

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Issue Date: 9/12/2006 **Rate Sheet:** NANTUCKET **Job ID:** 106471 **Page:** 1

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF LABOR
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

MITT ROMNEY
Govenor
KERRY HEALEY
Lt. Govenor

JOHN S. ZIEMBA
Director
ROBERT J. PREZIOSO
Commissioner

Awarding Authority: TOWN OF NANTUCKET
Contract Number: 2006-20 **City/Town:** NANTUCKET
Description Of Work: CHILDREN'S BEACH BOAT RAMP RECONSTRUCTION
Job Location: HARBOR VIEW WAY

Classification	Effective Dates and Total Rates							
DELEADER (BRIDGE)	7/1/2006	$55.630	1/1/2007	$56.780	7/1/2007	$58.080	1/1/2008	$59.230
	7/1/2008	$60.380	1/1/2009	$61.530	7/1/2009	$62.680	1/1/2010	$63.830
DEMO: ADZEMAN	6/1/2006	$39.600	12/1/2006	$40.700	6/1/2007	$41.850	12/1/2007	$42.950
	5/31/2008	$43.450						
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	6/1/2006	$40.600	12/1/2006	$41.700	6/1/2007	$42.850	12/1/2007	$43.950
	5/31/2008	$44.450						
DEMO: BURNERS	6/1/2006	$40.350	12/1/2006	$41.450	6/1/2007	$42.600	12/1/2007	$43.700
	5/31/2008	$44.200						
DEMO: CONCRETE CUTTER/SAWYER	6/1/2006	$40.600	12/1/2006	$41.700	6/1/2007	$42.850	12/1/2007	$43.950
	5/31/2008	$44.450						
DEMO: JACKHAMMER OPERATOR	6/1/2006	$40.350	12/1/2006	$41.450	6/1/2007	$42.600	12/1/2007	$43.700
	5/31/2008	$44.200						
DEMO: WRECKING LABORER	6/1/2006	$39.600	12/1/2006	$40.700	6/1/2007	$41.850	12/1/2007	$42.950
	5/31/2008	$43.450						
DIRECTIONAL DRILL MACHINE OPERATOR	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
DIVER	8/1/2006	$66.130	8/1/2007	$71.730				
DIVER TENDER	8/1/2006	$52.570	8/1/2007	$56.570				
DIVER TENDER (EFFLUENT)	8/1/2006	$69.520	8/1/2007	$75.520				
DIVER/SLURRY (EFFLUENT)	8/1/2006	$89.860	8/1/2007	$98.260				
ELECTRICIAN	9/1/2006	$46.970						
ELEVATOR CONSTRUCTOR	1/1/2006	$55.760	1/1/2007	$58.730				
ELEVATOR CONSTRUCTOR HELPER	1/1/2006	$42.620	1/1/2007	$44.990				
FENCE & GUARD RAIL ERECTOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
FIELD ENG. - INST. PERSON (BLDG, SITE, HVY CONST)	5/1/2006	$48.410	11/1/2006	$49.400	5/1/2007	$50.790	11/1/2007	$51.780
	5/1/2008	$5.160						
FIELD ENG. - ROD PERSON (BLDG, SITE, HVY CONST)	5/1/2006	$36.450	11/1/2006	$37.070	5/1/2007	$37.940	11/1/2007	$38.560
	5/1/2008	$39.420						
FIELD ENG.-CHIEF OF PARTY (BLDG, SITE, HVY CONST)	5/1/2006	$49.700	11/1/2006	$50.700	5/1/2007	$52.100	11/1/2007	$53.100
	5/1/2008	$54.500						
FIRE ALARM INSTALLER	9/1/2006	$46.970						
FIRE ALARM REPAIR / MAINTENANCE	9/1/2006	$36.840						
FIREMAN (ASST. ENGINEER)	6/1/2006	$46.200	12/1/2006	$47.420	6/1/2007	$48.290	12/1/2007	$49.500
FLAGGER & SIGNALER	6/1/2006	$30.300	12/1/2006	$31.400	6/1/2007	$32.550	12/1/2007	$33.650
	5/31/2008	$34.150						
FLOORCOVERER	9/1/2006	$50.350	3/1/2007	$51.520	9/1/2007	$52.690	3/1/2008	$53.860
	9/1/2008	$55.030	3/1/2009	$56.200				
FORK LIFT/CHERRY PICKER	6/1/2006	$50.890	12/1/2006	$52.290	6/1/2007	$53.290	12/1/2007	$54.690
GENERATOR/LIGHTING PLANT/HEATERS	6/1/2006	$42.260	12/1/2006	$43.330	6/1/2007	$44.080	12/1/2007	$45.150

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THE COMMONWEALTH OF MASSACHUSETTS
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Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

MITT ROMNEY
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Director
ROBERT J. PREZIOSO
Commissioner

Awarding Authority: TOWN OF NANTUCKET
Contract Number: 2006-20 **City/Town:** NANTUCKET
Description Of Work: CHILDREN'S BEACH BOAT RAMP RECONSTRUCTION
Job Location: HARBOR VIEW WAY

Classification	Effective Dates and Total Rates							
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	6/1/2006	$41.180	6/1/2007	$42.830	6/1/2008	$44.680		
HOISTING ENGINEER/CRANES/GRADALLS	6/1/2006	$50.890	12/1/2006	$52.290	6/1/2007	$53.290	12/1/2007	$54.690
HVAC (DUCTWORK)	10/1/2005	$43.330	10/1/2006	$44.330	4/1/2007	$45.330	10/1/2007	$46.330
	4/1/2008	$47.330	10/1/2008	$48.330	4/1/2009	$49.580	10/1/2009	$50.830
	4/1/2010	$52.080						
HVAC (ELECTRICAL CONTROLS)	9/1/2006	$46.970						
HVAC (PIPE)	9/1/2006	$51.120	3/1/2007	$52.120	9/1/2007	$53.120	3/1/2008	$54.120
	9/1/2008	$55.120						
HVAC (TESTING AND BALANCING - AIR)	10/1/2005	$43.330	10/1/2006	$44.330	4/1/2007	$45.330	10/1/2007	$46.330
	4/1/2008	$47.330	10/1/2008	$48.330	4/1/2009	$49.580	10/1/2009	$50.830
	4/1/2010	$52.080						
HVAC (TESTING AND BALANCING -WATER)	9/1/2006	$51.120	3/1/2007	$52.120	9/1/2007	$53.120	3/1/2008	$54.120
	9/1/2008	$55.120						
HYDRAULIC DRILLS	6/1/2006	$37.000	12/1/2006	$38.100	6/1/2007	$39.250	12/1/2007	$40.350
	5/31/2008	$40.850						
INSULATOR (PIPES & TANKS)	9/1/2006	$47.570	9/1/2007	$49.710	9/1/2008	$52.020	9/1/2009	$54.560
	9/1/2010	$57.150						
IRONWORKER/WELDER	5/29/2006	$44.200	1/1/2007	$45.100	5/28/2007	$46.000	12/31/2007	$46.900
	5/26/2008	$47.800	12/29/2008	$48.650				
JACKHAMMER & PAVING BREAKER OPERATOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
LABORER	6/1/2006	$36.250	12/1/2006	$37.350	6/1/2007	$38.500	12/1/2007	$39.600
	5/31/2008	$40.100						
LABORER: CARPENTER TENDER	6/1/2006	$36.250	12/1/2006	$37.350	6/1/2007	$38.500	12/1/2007	$39.600
	5/31/2008	$40.100						
LABORER: CEMENT FINISHER TENDER	6/1/2006	$36.250	12/1/2006	$37.350	6/1/2007	$38.500	12/1/2007	$39.600
	5/31/2008	$40.100						
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER	6/1/2006	$36.250	12/1/2006	$37.350	6/1/2007	$38.500	12/1/2007	$39.600
	5/31/2008	$40.100						
LABORER: MASON TENDER	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
LABORER: MULTI-TRADE TENDER	6/1/2006	$36.250	12/1/2006	$37.350	6/1/2007	$38.500	12/1/2007	$39.600
	5/31/2008	$40.100						
LABORER: TREE REMOVER	6/1/2006	$36.250	12/1/2006	$37.350	6/1/2007	$38.500	12/1/2007	$39.600
	5/31/2008	$40.100						
LASER BEAM OPERATOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
MARBLE & TILE FINISHERS	9/1/2006	$49.780	3/1/2007	$51.100				
MARBLE MASONS,TILELAYERS & TERRAZZO MECH	9/1/2006	$59.080	3/1/2007	$60.730				

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ROBERT J. PREZIOSO
Commissioner

Awarding Authority: TOWN OF NANTUCKET
Contract Number: 2006-20 **City/Town:** NANTUCKET
Description Of Work: CHILDREN'S BEACH BOAT RAMP RECONSTRUCTION
Job Location: HARBOR VIEW WAY

Classification	Effective Dates and Total Rates							
MECH. SWEEPER OPERATOR (NON-CONSTRUCTION)	7/1/2006	$25.570						
MECH. SWEEPER OPERATOR (ON CONST. SITES)	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
MECHANICS MAINTENANCE	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
MILLWRIGHT	4/1/2006	$47.550						
MORTAR MIXER	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
OILER (OTHER THAN TRUCKS,CRANES,GRADALLS)	6/1/2006	$37.280	12/1/2006	$38.150	6/1/2007	$38.770	12/1/2007	$39.640
OILER (TRUCKS,CRANES,GRADALLS)	6/1/2006	$39.690	12/1/2006	$40.660	6/1/2007	$41.350	12/1/2007	$42.310
OTHER POWER DRIVEN EQUIPMENT - CLASS II	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
PAINTER (BRIDGES/TANKS)	7/1/2006	$55.630	1/1/2007	$56.780	7/1/2007	$58.080	1/1/2008	$59.230
	7/1/2008	$60.380	1/1/2009	$61.530	7/1/2009	$62.680	1/1/2010	$63.830
PAINTER (SPRAY OR SANDBLAST, NEW) *	7/1/2006	$46.530	1/1/2007	$47.680	7/1/2007	$48.980	1/1/2008	$50.130
	7/1/2008	$51.280	1/1/2009	$52.430	7/1/2009	$53.580	1/1/2010	$54.730
PAINTER (SPRAY OR SANDBLAST, REPAINT)	7/1/2006	$44.590	1/1/2007	$45.740	7/1/2007	$47.040	1/1/2008	$48.190
	7/1/2008	$49.340	1/1/2009	$50.490	7/1/2009	$51.640	1/1/2010	$52.790
PAINTER (TRAFFIC MARKINGS)	6/1/2006	$36.250	12/1/2006	$37.350	6/1/2007	$38.500	12/1/2007	$39.600
	5/31/2008	$40.100						
PAINTER / TAPER (BRUSH, NEW) *	7/1/2006	$45.130	1/1/2007	$46.280	7/1/2007	$47.580	1/1/2008	$48.730
	7/1/2008	$49.880	1/1/2009	$51.030	7/1/2009	$52.180	1/1/2010	$53.330
PAINTER / TAPER (BRUSH, REPAINT)	7/1/2006	$43.190	1/1/2007	$44.340	7/1/2007	$45.640	1/1/2008	$46.790
	7/1/2008	$47.940	1/1/2009	$49.090	7/1/2009	$50.240	1/1/2010	$51.390
PANEL & PICKUP TRUCKS DRIVER	8/1/2006	$38.060	12/1/2006	$38.760	6/1/2007	$39.260	8/1/2007	$39.760
	12/1/2007	$40.460	6/1/2008	$40.960	8/1/2008	$41.460	12/1/2008	$42.160
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK)	8/1/2006	$52.570	8/1/2007	$56.570				
PILE DRIVER	8/1/2006	$52.570	8/1/2007	$56.570				
PIPELAYER	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
PLUMBER & PIPEFITTER	9/1/2006	$51.120	3/1/2007	$52.120	9/1/2007	$53.120	3/1/2008	$54.120
	9/1/2008	$55.120						
PNEUMATIC CONTROLS (TEMP.)	9/1/2006	$51.120	3/1/2007	$52.120	9/1/2007	$53.120	3/1/2008	$54.120
	9/1/2008	$55.120						
PNEUMATIC DRILL/TOOL OPERATOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
POWDERMEN & BLASTER	6/1/2006	$37.250	12/1/2006	$38.350	6/1/2007	$39.500	12/1/2007	$40.600
	5/31/2008	$41.100						
POWER SHOVEL/DERRICK/TRENCHING MACHINE	6/1/2006	$50.890	12/1/2006	$52.290	6/1/2007	$53.290	12/1/2007	$54.690
PUMP OPERATOR (CONCRETE)	6/1/2006	$50.890	12/1/2006	$52.290	6/1/2007	$53.290	12/1/2007	$54.690
PUMP OPERATOR (DEWATERING, OTHER)	6/1/2006	$42.260	12/1/2006	$43.330	6/1/2007	$44.080	12/1/2007	$45.150
READY-MIX CONCRETE DRIVER	6/1/2006	$26.410	6/1/2007	$27.360	6/1/2008	$28.310		

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27B. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street , Boston, MA 02108; Tel: (617) 727-3465.

Issue Date: 9/12/2006 **Rate Sheet:** NANTUCKET **Job ID:** 106471 **Page:** 4

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF LABOR
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

MITT ROMNEY
Govenor
KERRY HEALEY
Lt. Govenor

JOHN S. ZIEMBA
Director
ROBERT J. PREZIOSO
Commissioner

Awarding Authority: TOWN OF NANTUCKET
Contract Number: 2006-20 **City/Town:** NANTUCKET
Description Of Work: CHILDREN'S BEACH BOAT RAMP RECONSTRUCTION
Job Location: HARBOR VIEW WAY

Classification	Effective Dates and Total Rates							
RECLAIMERS	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
RESIDENTIAL WOOD FRAME CARPENTER **	9/1/2005	$31.350						
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
ROLLER/SPREADER/MULCHING MACHINE	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)	8/1/2006	$47.460	2/1/2007	$48.910	8/1/2007	$50.010	2/1/2008	$41.410
	8/1/2008	$52.510	2/1/2009	$53.910				
SHEETMETAL WORKER	10/1/2005	$43.330	10/1/2006	$44.330	4/1/2007	$45.330	10/1/2007	$46.330
	4/1/2008	$47.330	10/1/2008	$48.330	4/1/2009	$49.580	10/1/2009	$50.830
	4/1/2010	$52.080						
SIGN ERECTOR	6/1/2005	$29.070						
SLATE / TILE / PRECAST CONCRETE ROOFER	8/1/2006	$47.710	2/1/2007	$49.160	8/1/2007	$50.260	2/1/2008	$51.660
	8/1/2008	$52.760	2/1/2009	$54.160				
SPECIALIZED EARTH MOVING EQUIP < 35 TONS	8/1/2006	$38.520	12/1/2006	$39.220	6/1/2007	$39.720	8/1/2007	$40.750
	12/1/2007	$40.920	6/1/2008	$41.420	8/1/2008	$41.920	12/1/2008	$42.620
SPECIALIZED EARTH MOVING EQUIP > 35 TONS	8/1/2006	$38.810	12/1/2006	$39.510	6/1/2007	$40.010	8/1/2007	$40.510
	12/1/2007	$41.210	6/1/2008	$41.710	8/1/2008	$42.210	12/1/2008	$42.910
SPRINKLER FITTER	4/1/2006	$44.780	1/1/2007	$46.530				
STEAM BOILER OPERATOR	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
TELECOMMUNICATION TECHNICIAN	9/1/2006	$36.840						
TERRAZZO FINISHERS	9/1/2006	$57.980	3/1/2007	$59.630				
TEST BORING DRILLER	6/1/2006	$41.000	12/1/2006	$42.100	6/1/2007	$43.250	12/1/2007	$44.350
	5/31/2008	$44.850						
TEST BORING DRILLER HELPER	6/1/2006	$39.720	12/1/2006	$40.820	6/1/2007	$41.970	12/1/2007	$43.070
	5/31/2008	$43.570						
TEST BORING LABORER	6/1/2006	$39.600	12/1/2006	$40.700	6/1/2007	$41.850	12/1/2007	$42.950
	5/31/2008	$43.450						
TRACTORS/PORTABLE STEAM GENERATORS	6/1/2006	$50.620	12/1/2006	$52.010	6/1/2007	$53.000	12/1/2007	$54.390
TRAILERS FOR EARTH MOVING EQUIPMENT	8/1/2006	$39.100	12/1/2006	$39.800	6/1/2007	$40.300	8/1/2007	$40.800
	12/1/2007	$41.500	6/1/2008	$42.000	8/1/2008	$42.500	12/1/2008	$43.200
TUNNEL WORK (COMP. AIR HAZ. WASTE)	6/1/2006	$53.130	12/1/2006	$54.380	6/1/2007	$55.780	12/1/2007	$57.530
TUNNEL WORK (COMPRESSED AIR)	6/1/2006	$51.130	12/1/2006	$52.380	6/1/2007	$53.780	12/1/2007	$55.530
TUNNEL WORK (FREE AIR HAZ. WASTE)	6/1/2006	$45.200	12/1/2006	$46.450	6/1/2007	$47.850	12/1/2007	$49.600
TUNNEL WORK (FREE AIR)	6/1/2006	$43.200	12/1/2006	$44.450	6/1/2007	$45.850	12/1/2007	$47.600
VAC-HAUL	8/1/2006	$38.520	12/1/2006	$39.220	6/1/2007	$39.720	8/1/2007	$40.220
	12/1/2007	$40.920	6/1/2008	$41.420	8/1/2008	$41.920	12/1/2008	$42.620
WAGON DRILL OPERATOR	6/1/2006	$36.500	12/1/2006	$37.600	6/1/2007	$38.750	12/1/2007	$39.850
	5/31/2008	$40.350						
WASTE WATER PUMP OPERATOR	6/1/2006	$50.890	12/1/2006	$52.290	6/1/2007	$53.290	12/1/2007	$54.690

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27B. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street , Boston, MA 02108; Tel: (617) 727-3465.

Issue Date: 9/12/2006 **Rate Sheet:** NANTUCKET **Job ID:** 106471 **Page:** 5

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF LABOR
DIVISION OF OCCUPATIONAL SAFETY

Prevailing Wage Rates

As determined by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

MITT ROMNEY
Govenor
KERRY HEALEY
Lt. Govenor

JOHN S. ZIEMBA
Director
ROBERT J. PREZIOSO
Commissioner

Awarding Authority: TOWN OF NANTUCKET
Contract Number: 2006-20 **City/Town:** NANTUCKET
Description Of Work: CHILDREN'S BEACH BOAT RAMP RECONSTRUCTION
Job Location: HARBOR VIEW WAY

Classification	Effective Dates and Total Rates							
WATER METER INSTALLER	9/1/2006	$51.120	3/1/2007	$52.120	9/1/2007	$53.120	3/1/2008	$54.120
	9/1/2008	$55.120						

* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.

** The Residential Wood Frame Carpenter classification applies only to the construction of new, wood frame residences that do not exceed four stories including the basement.

This wage schedule must be posted at the work site in accordance with M.G.L. ch. 149, sec. 27

Failure of the employer to pay "prevailing wage rates," which are the minimum wage rates listed above, on public works projects is a violation of M.G.L. ch. 149, sec. 27B. Employees not receiving such rates should report the violation to the Office of Fair Labor and Business Practices, 100 Cambridge Street , Boston, MA 02108; Tel: (617) 727-3465.

Issue Date: 9/12/2006 **Rate Sheet:** NANTUCKET **Job ID:** 106471 **Page:** 6

COMMONWEALTH OF MASSACHUSETTS

Division of Occupational Safety

Minimum wage rates for apprentices employed on public works projects are listed below as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 through 27D, as ammended

All apprentices must be registered with the Division of Apprentice Training in accordance with M.G.L. Chapter 23, Sections 11E-11L

City/Town: NANTUCKET

Classification	Ratio*	All steps are 6 months (1000 Hours) unless otherwise specified**									
		1	2	3	4	5	6	7	8	9	10
ASBESTOS INSULATOR (Pipes & Tanks)	1:4	50	60	70	80						
		Steps are 1 year									
BOILERMAKER	1:5	65	65	70	75	80	85	90	95		
BRICK/PLASTER/CEMENT MASON	1:5	50	60	70	80	90					
CARPENTER	1:5	50	60	70	75	80	80	90	90		
CARPENTER (Residential Wood Frame)	1:5	60	60	65	70	75	80	85	90		
ELECTRICIAN	2:3***	40	45	50	55	60	65	70	75		
ELEVATOR CONSTRUCTOR	1:1	50	55	65	70	80					
		Steps 1-2 are 6 mos.; Steps 3-5 are 1 year									
FLOORCOVERER	1:1	50	55	60	65	70	75	80	85		
		Steps are 950 hrs.									
GLAZIER	1:1	50	56.3	62.5	68.8	75	81.3	88	94		
HOIST/PORT. ENG.	1:5	55	60	65	70	75	80	85	90		
IRONWORKER	1:5	70	75	80	85	90	95				
LABORER	1:5	60	70	80	90						
MARBLE-TILE-TERRAZZO FINISHER	1:3	50	60	70	80	90					
		Steps are 800 hrs.									
MARBLE-TILE-TERRAZZO MECHANIC	1:3	50	60	70	80	90					
MILLWRIGHT	1:5	50	55	60	65	70	75	80	85		

* Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.

** Multiple ratios are listed in comment field.

*** The job site ratio of 2 apprentices for every 3 journeymen is allowed as follows: 1 journeyman may supervise not more than 1 apprentice; 2 to 3 journeymen may supervise not more than 2 apprentices; 4 to 6 journeymen may supervise not more than 4 apprentices; 7 to 9 journeymen may supervise not more than 6 apprentices; 10 to 12 journeymen may supervise not more than 8 apprentices; 13 to 15 journeymen may supervise not more than 10 apprentices; etc. Not more than 50% of the apprentices on a job site may have standing as a 1st year apprentice. All other apprentices must have 2nd, 3rd, 4th, or 5th year standing.

Issue Date: 9/12/2006 **Rate Sheet:** NANTUCKET **Job ID:** 106471

COMMONWEALTH OF MASSACHUSETTS

Division of Occupational Safety

Minimum wage rates for apprentices employed on public works projects are listed below as a percentage of the pre-determined hourly wage rate established by the Commissioner under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 through 27D, as ammended

All apprentices must be registered with the Division of Apprentice Training in accordance with M.G.L. Chapter 23, Sections 11E-11L

City/Town: NANTUCKET

All steps are 6 months (1000 Hours) unless otherwise specified**

PAINTER	1:1	50	55	60	65	70	75	80	90		
				Steps are 750 hrs.							
PILE DRIVER	1:3	60	65	70	75	80	85	90	95		
PLUMBER/PIPEFITTER	1:5	40	40	45	50	55	60	65	75	80	85
ROOFER	**	50	60	65	75	85					
** 1:5, 2:6 -10 thereafter 1:10 (or portion thereof)				Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.							
ROOFER (REROOFING)	**	50	60	65	75	85					
** 1:4; Thereafter 1:1				Step 1 is 2000 hrs.; Steps 2-5 are 1000 hrs.							
SHEET METAL WORKER	1:4	40	45	50	60	65	75	85			
				Step 1-3 are 1 year; Steps 4-7 are 6 mos.							
SIGN ERECTOR	1:1	50	55	60	65	70	75	80	85	90	
				Steps are 4 mos.							
SPRINKLER FITTER	1:1	50	50	55	60	65	70	75	80	85	90
TELECOMMUNICATION TECHNICIAN	1:1	45	50	55	60	65	75	80	85		

* Ratios are expressed in allowable number of apprentices to journeymen or fraction thereof.

** Multiple ratios are listed in comment field.

*** The job site ratio of 2 apprentices for every 3 journeymen is allowed as follows: 1 journeyman may supervise not more than 1 apprentice; 2 to 3 journeymen may supervise not more than 2 apprentices; 4 to 6 journeymen may supervise not more than 4 apprentices; 7 to 9 journeymen may supervise not more than 6 apprentices; 10 to 12 journeymen may supervise not more than 8 apprentices; 13 to 15 journeymen may supervise not more than 10 apprentices; etc. Not more than 50% of the apprentices on a job site may have standing as a 1st year apprentice. All other apprentices must have 2nd, 3rd, 4th, or 5th year standing.

Issue Date: 9/12/2006 **Rate Sheet:** NANTUCKET **Job ID:** 106471

AGREEMENT BETWEEN
THE TOWN OF NANTUCKET, MASSACHUSETTS
AND
INDEPENDENT CONTRACTOR

THIS AGREEMENT made effective _____, 2006, by and between the TOWN OF NANTUCKET, MASSACHUSETTS, a municipal corporation, acting by and through its Town Administrator, with offices at Town Hall, Nantucket, Massachusetts 02554 (hereinafter called the "TOWN"), and xxxxxxxxx whose principal office address and state of incorporation are as set forth on Exhibit A (hereinafter called the "CONTRACTOR").

RECITALS:

WHEREAS, the TOWN desires to retain the CONTRACTOR to provide certain services for the TOWN as described, below, and the CONTRACTOR is willing to accept such engagement, all on the terms hereinafter set forth,

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

ARTICLE 1 - ENGAGEMENT OF THE CONTRACTOR

1.1 The TOWN hereby engages the CONTRACTOR, and the CONTRACTOR hereby accepts the engagement, to perform certain services for the TOWN, as described in Article 2.

1.2. In the performance of any service under this Agreement, the CONTRACTOR acts at all times as an independent contractor. There is no relationship of employment or agency between the TOWN, on the one hand, and the CONTRACTOR on the other, and the TOWN shall not have or exercise any control or direction over the method by which the CONTRACTOR performs its work or functions aside from such control or directions which are consistent with the independent contractor relationship contemplated in the Agreement.

ARTICLE 2 - SERVICES OF THE CONTRACTOR

2.1 The CONTRACTOR will perform the services described in the Scope of Services set forth on Exhibit A (the "Work").

2.2 The CONTRACTOR shall report, and be responsible, to the TOWN and its designee (if any) as set forth on Exhibit A.

2.3 There shall be no amendment to the Scope of Services or Work provided for in this Agreement without the written approval of the TOWN. The TOWN shall be under no obligation to pay for any services performed by the CONTRACTOR which are not explicitly agreed to by the TOWN in writing.

2.4 The CONTRACTOR represents and warrants to the TOWN that the CONTRACTOR (including all of its personnel, whether employees, agents or independent contractors) will be qualified and duly licensed (if necessary) to perform the services required by this Agreement and further agrees to perform services in a professional manner adhering to a reasonable standard of care and in accordance with all applicable

local, state or federal ordinances, laws, rules and regulations. The CONTRACTOR will obtain any and all permits, bonds and other items required for the proper and legal performance of the work.

2.5 The CONTRACTOR represents and warrants to the TOWN that it is not a party to any agreement, contract or understanding which would in any way restrict or prohibit it from undertaking or performing its obligations hereunder in accordance with the terms and conditions of this Agreement.

2.6 All written materials and any other documents (whether in the form of "hard" copies, graphics, magnetic media or otherwise) which are produced by the CONTRACTOR pursuant to this Agreement shall be deemed to be "work for hire" and the copyright thereto shall be the property of the TOWN. The TOWN acknowledges that such materials are being prepared with respect to the specific project contemplated hereby and that any reuse of such materials by the TOWN in connection with any other project shall be at the TOWN's sole risk unless otherwise agreed to by the CONTRACTOR in writing.

ARTICLE 3 - PERIOD OF SERVICES

3.1 Unless otherwise provided on Exhibit A, the term of this Agreement shall commence on the date hereof and continue until the Work is completed to the Town's reasonable satisfaction.

3.2 The CONTRACTOR shall proceed with the Work promptly after receiving authorization to proceed and will diligently and faithfully prosecute the Work to completion in accordance with the provisions hereof. In any event, the Work shall be completed not later than the date set forth on Exhibit A. The CONTRACTOR acknowledges that time is of the essence of this Agreement.

3.3 If the CONTRACTOR is delayed in the performance of any of its obligations under this Agreement by the occurrence of an event which may not reasonably be anticipated or avoided or is otherwise beyond its control such as fire or other casualty, abnormal adverse weather conditions, acts of God (collectively, "Unavoidable Events") which materially and adversely affect its ability to perform the Work, then the time for the CONTRACTOR to perform the Work shall be extended for such time as the TOWN shall reasonably determine is necessary to permit the CONTRACTOR to perform in light of the effects of the Unavoidable Event.

If an Unavoidable Event occurs which makes the performance of the Agreement impossible without the expenditure of additional TOWN funds, the TOWN may, at its option, elect to terminate this Agreement upon thirty (30) days written notice.

ARTICLE 4 - PAYMENTS TO THE CONTRACTOR

4.1 The compensation to due to the CONTRACTOR shall be paid in the amounts, and in the manner, set forth on Exhibit B, attached hereto.

4.2 The CONTRACTOR will bill the TOWN at the completion of the work unless otherwise provided on Exhibit B, with one or more invoices broken down to show the quantity of work performed and the percentage of the entire project completed, categories and amount of reimbursable expenses (if any), and provide such supporting data as may be required by the TOWN.

4.3 The TOWN will pay the CONTRACTOR upon review and approval of such invoices by the TOWN or its designee.

4.4 This project may be subject to budgetary restrictions which may limit the total amount of funds available for the work. Accordingly, unless otherwise stated on Exhibit B, the TOWN will not be obligated to pay any amount in excess of the maximum project amount without the express written approval of the TOWN.

ARTICLE 5 - TERMINATION

5.1 This Agreement may be terminated, with cause, by either the TOWN or CONTRACTOR, upon written notice given by the non-defaulting party. For the purposes of this provision, "cause" shall include the failure of a party to fulfill its material duties hereunder in a timely and proper manner.

5.2 The TOWN shall have the right to terminate this Agreement for its convenience upon ten (10) days written notice.

5.3 Following termination of this Agreement, the parties shall be relieved of all further obligations hereunder except:

(a) the TOWN shall remain liable for payments for the services and/or expenses of CONTRACTOR accrued prior to the effective date of the notice of termination in compliance with this Agreement (less all costs reasonably incurred by the TOWN as a result of the CONTRACTOR's default, if any), as determined by the TOWN but for no other amounts including, without limitation, claims for lost profits on work not performed; and

(b) the CONTRACTOR shall remain liable for any damages, expenses or liabilities arising under this Agreement (including its indemnity obligations) with respect to work performed pursuant to the Agreement.

ARTICLE 6 - INSURANCE AND INDEMNIFICATION

6.1 The CONTRACTOR agrees to indemnify and save the TOWN harmless from any and all manner of suits, claims, or demands arising out of any errors, omissions or negligence by CONTRACTOR (including all its employees, agents and independent contractors) in performing the Work, or any breach of the terms of this Agreement by such CONTRACTOR and shall reimburse the TOWN for any and all costs, damages and expenses, including reasonable attorney's fees, which the TOWN pays or becomes obligated to pay, by reason of such activities, or breach. The provisions of this Section 6.1 shall be in addition to, and shall not be construed as a limitation on, any other legal rights of the TOWN with respect to the CONTRACTOR, in connection with this Agreement.

6.2 Before commencing work, the CONTRACTOR shall obtain and maintain, at its expense and from insurance companies of a Best Rating of A or better which are licensed to do business in the Commonwealth of Massachusetts, insurance as set forth below.

(a) Workers' Compensation, covering the obligations of the CONTRACTOR in accordance with applicable Workers' Compensation or Benefits laws.

(b) Commercial General Liability Insurance on an occurrence basis with a combined single limit of not less than $1 million. Coverage is to include premises and operations, coverage for liability of subcontractors. The policy shall contain an endorsement stating that the aggregate limits will apply separately to the work being performed under this Agreement.

(c) Automobile Liability Insurance of not less than $1 million combined single limit covering owned, hired and non-hired vehicle use.

(d) Such additional insurance as may be required to be carried by the CONTRACTOR by law.

(f) Such additional insurance as the TOWN may reasonably require as set forth on Exhibit A.

CONTRACTOR shall maintain such insurance during the term of Agreement and give the TOWN twenty (20) days written notice of any change or cancellation of coverage. Each insurer providing policies hereunder shall waive its rights to subrogate claims against the TOWN. The TOWN will be added as an additional named insured with respect to each such policy and such endorsement shall be reflected on an Certificate of Insurance to be delivered to the TOWN upon the execution of this Agreement and at such times thereafter as the TOWN may reasonably request.

ARTICLE 7 - GENERAL PROVISIONS

7.1 Upon the expiration or the termination of this Agreement for any reason, all data, drawings, specifications, reports, estimates, summaries and other work product which have been accumulated, developed or prepared by the CONTRACTOR (whether completed or in process) shall become the property of the TOWN and the CONTRACTOR shall immediately deliver or otherwise make available all such material to the TOWN.

7.2 Neither party may assign, transfer or otherwise dispose of this Agreement or any of its rights hereunder or otherwise delegate any of its duties hereunder without the prior written consent of the other party, and any such attempted assignment or other disposition without such consent shall be null and void and of no force and effect.

7.3 Except as otherwise expressly provided in this Agreement, any decision or action made by the TOWN relating to this Agreement, its operation, amendment or termination, shall be made by the Board, Committee or Authority of the TOWN specified in the initial paragraph of this Agreement, unless specifically authorized or delegated by a lawful vote of such body.

7.4 This Agreement, together with Exhibit A (Contractor, Scope of Work, Term), Exhibit B (Payments) and Exhibit C (Tax Compliance Certificate) and any additional exhibits referred to therein, constitute the entire agreement of TOWN and CONTRACTOR with respect to the matters set forth therein and may not be changed, amended, modified or terms waived except by a writing signed by TOWN and CONTRACTOR. If there is any conflict between a term set forth in the body of this Agreement and a term set forth on Exhibit A or Exhibit B hereto, the term set forth in the Exhibit shall govern; however, if any term or provision of any document attached hereto or incorporated by reference conflicts with a term of this Agreement (including the Exhibits listed above), the term of the Agreement shall govern. Any notices required or allowed shall be to the person's address above by certified mail, return receipt requested.

7.5 This Agreement is governed by the law of The Commonwealth of Massachusetts and shall be construed in accordance therewith.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first written above.

TOWN OF NANTUCKET, MASSACHUSETTS	CONTRACTOR Xx Name XX
C. Elizabeth Gibson Town Administrator	NAME President
Org./Obj.:	FEIN:

Approved as To Funds Available:

Constance Voges, Finance Director

EXHIBIT A

CONTRACTOR, SCOPE OF WORK, TERM

1. Name of Contractor:

2. State of Incorporation:

3. Principal Office Address:

4. Description of Services (§2.1):

5. Person, Department, or Committee, if any, to whom CONTRACTOR reports (§ 2.2): Dave Fronzuto, Harbor Master 508-228-7261

6. Term of Agreement (§3.1): Completion of work.

7. Completion Date (§3.2): April 1, 2007

8. Additional Insurance Coverage (§6.2(e)):

EXHIBIT B

PAYMENTS

1. Lump Sum Method

   a. Maximum Project Amount:

   b. Payment Increments:

   c. Reimbursable Expenses (if any): None.

BIDDER'S CHECKLIST

Required for bid submittals:

- ❍ Bid Price Form
- ❍ Certificate of Non Collusion
- ❍ Tax compliance certificate
- ❍ Reference list
- ❍ Signature page from Town of Nantucket contract agreement
- ❍ Bid deposit of 5% of bid amount